GraybaR
ELECTRIC COMPANY

Catalog
№ 101

THE GRAYBAR TAG SYMBOL OF DISTRIBUTION

A NATION-WIDE SERV
Seattle
Tacoma
Spokane
Portland
Salt Lake City
Denver
Omaha
Oakland
San Francisco
Los Angeles
Fort Worth
San Antonio

CE OF DISTRIBUTION

TABLE OF CONTENTS

For complete alphabetical Index see Page 707

Section 1—LINE EQUIPMENT

PAGE

7 . . . Poles, Crossarms
28 . . . Pole Line Hardware
36 . . . Pins and Brackets
53 . . . Glass and Porcelain High Voltage Insulators
62 . . . Line Construction Tools and Equipment
100 . . . Underground Construction Material
113 . . . Street Lighting Equipment

Section 2—POWER APPARATUS

143 . . . Transformers
153 . . . Arrestors and High Voltage Equipment
158 . . . Watthour Meters and Instruments
172 . . . Switchgear
180 . . . Motors and Controllers
202 . . . Power Pumps, Tools, and Ventilating Equipment
217 . . . Industrial Heating Equipment

Section 3—INSIDE WIRING MATERIAL

223 . . . Wire, Cable, and Cord
252 . . . Tape, Soldering Material, Lugs, and Connectors
266 . . . Porcelain Knobs, Cleats and Tubes
270 . . . Conduit, Molding, Fittings, Boxes
305 . . . Condulets
367 . . . Sockets, Receptacles
391 . . . Plugs, Receptacles, Convenience Outlets
420 . . . Surface and Flush Switches
443 . . . Safety, Knife and Time Switches
474 . . . Cutouts and Fuses
488 . . . Panels and Cabinets

Section 4—LAMPS AND LIGHTING EQUIPMENT

523 . . . Lamps and Guards
533 . . . Industrial and Commercial Lighting Equipment
590 . . . Floodlights and Airport Lighting
598 . . . Flashlights, Batteries, Rectifiers, Small Transformers

Section 5—SIGNALLING EQUIPMENT

612 . . . Annunciators, Alarm Equipment
626 . . . Bells, Buzzers, Push Buttons
645 . . . Interphones
654 . . . Telephone Switchboards
657 . . . Magneto Telephones
668 . . . Telephone Cable

Section 6—RESEARCH PRODUCTS

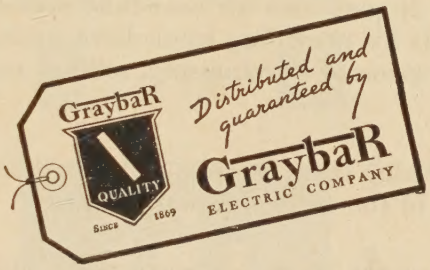
672 . . . Scientific Equipment, Audiphones
673 . . . Broadcasting Equipment
674 . . . Public Address and Radio Systems

Section 7—RADIO AND APPLIANCES

675 . . . Radio Receivers and Tubes
677 . . . Graybar Distributed Appliances

GraybaR

ELECTRIC COMPANY



CATALOG

No. 101

Graybar's Creed

AS A DISTRIBUTOR

•

The Graybar Electric Company Believes:

1. That it performs an economic service for the wholesale buyer of electrical goods by maintaining adequate, well-selected, and convenient stocks of quality materials, thus relieving him of the burdens of handling, storage, investment, and obsolescence.

2. That likewise it performs an economic service for the maker of electrical goods by providing immediate nation-wide distribution without duplication of warehousing, selling, and credit operations; and,

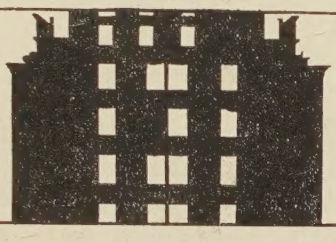
3. That in performing these services, it lowers the cost of distribution to the benefit of the entire Industry; and,

4. That, consequently, it has a recognized place in the economic structure of the Industry and that it need not and should not engage in any activity detrimental to the Industry;

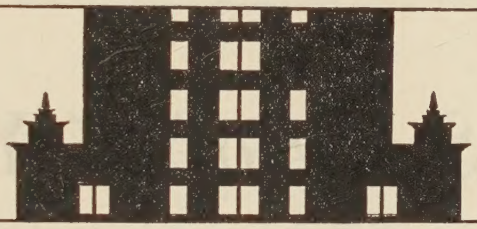
5. That finally, since its own success will follow the success of the Industry, it should endeavor in its publicity to bring about a greater public appreciation of Electricity; and that it should pursue and encourage sound merchandising and credit practices and in every way possible contribute to the advancement of the Electrical Industry.

GRAYBAR ELECTRIC COMPANY—DISTRIBUTORS OF 60,000 ELECTRICAL ITEMS THROUGH 73 DISTRIBUTING HOUSES

FROM TOP



TO



BOTTOM

MENTION anything electrical that goes into any building anywhere, and you've named a Graybar item . . . More than that. You've named an item that is available to you on quick demand through a nationwide distributing service which conserves not only your time but your need for excessive reserve stocks . . . You've named one of Graybar's 60,000 items . . . Graybar Electric Co., Executive Offices: Graybar Building, Lexington Avenue and 43rd Street, New York, N. Y. Offices in 73 Principal Cities.

GraybaR
ELECTRIC COMPANY

THE GRAYBAR TAG—SYMBOL OF DISTRIBUTION

From Gray to

This photograph shows the entire factory and sales force of Gray and Barton in front of the original factory.

The Story of 65 Years

WAY back in 1869 two energetic and ambitious young men started a modest workshop to make electrical bells, buzzers and pushbuttons.

These men were Elisha Gray and Enos M. Barton and they called their little business Gray and Barton. This business, started before the telephone or electric light had taken their place in the scheme of things, later grew to be the company now known as Graybar.

Elisha Gray and Enos Barton were men of vision but even in their most ambitious moments, they could not have visualized the tremendous growth of the industry in which they were pioneers or of the company they founded. Gray and Barton in 1872 became the Western Electric Manufacturing Company and on January 1, 1926, Graybar Electric Company. It is highly appropriate that the names of these two electrical pioneers should be perpetuated in the name of the largest distributor of things electrical.

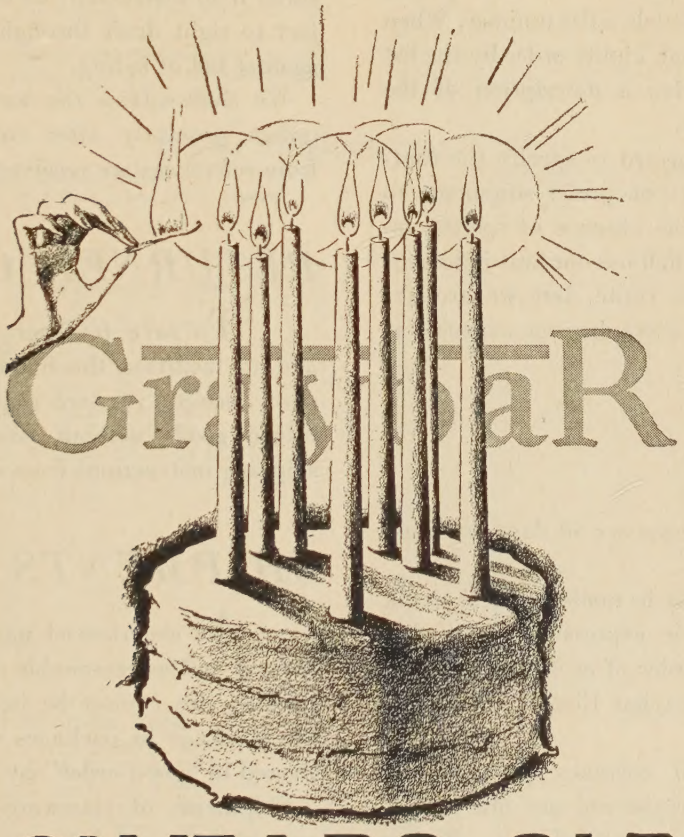
Matching the growth of the electrical industry and keeping pace with its development, Graybar Electric Company has had an active part in this industry during all these sixty-five years. Today, Graybar stands ready to intelligently serve those who need things electrical.

Graybar offers electrical buyers a wide selection of quality electrical items from warehouse stocks in 73 cities, strategically located in relation to trading centers from coast to

and Barton

GraybaR

coast. Graybar offers an assurance of satisfaction to all its customers, backed by a sixty-five year reputation for fair dealing. Graybar offers the experience of all these years in helping you to select the proper electrical equipment for your needs and in getting this equipment where you want it, when you want and as you want it.



8 YEARS OLD

GraybaR

65 YEARS IN BUSINESS

In 1869, Gray and Barton; in 1872, Western Electric Manufacturing Company; in 1881, Western Electric Company; in 1926, Graybar Electric Company.

PRICES

PRICES found in this catalogue are revised to agree with the latest lists at the time of issue. It is understood that they are subject to change without notice and are, therefore, not offered by us as a quotation. It is contemplated that all prices are for shipment from our warehouse unless otherwise specified, except such goods as are shipped regularly direct from factories, in which cases prices are for factory delivery unless otherwise specifically agreed upon.

ORDERS

WHEN possible, we have placed opposite each article a list number. When ordering material, kindly order by the list number and give a description of the article required.

You are requested to specify the routing over which you prefer shipments to be made. In the absence of specific instructions, we shall use our best judgment in selecting the route, but we are not responsible for extra drayage expenses at destination.

TERMS

OUR terms are 30 days net from date of invoice.

Payments may be made by check, bank draft, postal or express money order, drawn to the order of or endorsed to the order of the Graybar Electric Company, Inc.

Payments in currency through the mails even if registered are not recommended and are at sender's risk. We are not responsible for loss or miscarriage of the mails.

Receipts are not issued for remittances unless requested. Our endorsement on remittance is acknowledgment of the receipt of the funds.

We solicit new accounts on a credit basis, and in order to give prompt service, request that where you are not rated by the Commercial Agencies, references or other information of a credit character be forwarded with the order. These will be immediately acted upon, and the results held in strict confidence for our sole use and, when reasonably satisfactory, shipment will follow with all possible dispatch.

To avoid the delay incidental to communicating with references, etc., it would be mutually convenient, when immediate shipment is desired, to instruct us to ship C. O. D. by express, or parcel post (insured if so instructed) or by freight subject to sight draft through a local bank against bill of lading.

We shall advise the terms on future orders promptly after communications from references are received.

RETURNED GOODS

TO save transportation charges, and to facilitate the handling of goods upon receipt, you are requested not to return goods without having obtained shipping instructions from us.

SHIPMENTS

AS experienced packers are employed, and as reasonable care is used in packing, we cannot be held responsible for breakage in packages which are delivered in "good order" by the carrier.

Shipments of glassware are made at your risk.

Goods ordered to be shipped by parcel post will be sent only at the purchaser's risk of loss or damage.

Wood Pole Specifications

Values for the ultimate fibre stresses of wood poles were approved by the American Standards Association November, 1930. These values are as follows:

Southern Yellow Pine Creosoted...7,400 lbs. per sq. in.
Western Red Cedar.....5,600 lbs. per sq. in.
Northern White Cedar.....3,600 lbs. per sq. in.
Chestnut.....6,000 lbs. per sq. in.

This Association adopted the principles given below as a working plan for the development of the specification circumference table in which table Classes 1 to 7 are defined primarily by their circumferences at 6 ft. from the butt and designed to meet the following breaking loads under the conditions imposed in Principle 4. Classes 8, 9 and 10, having no butt requirement, were defined by minimum permitted top circumferences only.

Class	1	2	3	4	5	6	7
Lb. Sq. In.	4500	3700	3000	2400	1900	1500	1200

These principles are:

1.—All tables shall be based on standard fibre strengths, for the respective species.

2.—The tables shall specify dimensions in terms of circumference in inches at six feet from the butt, except for classes of "No Butt Requirement," and circumference in inches at the top for poles of the respective lengths and classes.

3.—All poles of the same length and class shall have when new approximately equal strength, or in more precise terms, equal moments of resistance at the ground line.

4.—All poles of different lengths within the same class shall be of suitable size to withstand approximately the same breaking load, assuming that the load is applied two feet from the top and that the break would occur at the ground line.

5.—The smallest class for which butt measurements shall be specified shall have a breaking load under the conditions stated in Principle 4 of approximately 1200 pounds.

6.—The largest class for which butt measurements shall be specified shall have a breaking load under the conditions stated in Principle 4 of approximately 4500 pounds.

7.—The classes from the lowest to the highest shall be arranged in geometric progression, the increments between classes, measured in terms of breaking load, to be approximately 25 per cent.

ASA Specification dimension tables will be found in this catalogue under each species of timber we discuss.

The breaking loads of the various classes previously mentioned are translated into terms of moments of resistance at the ground line and the required ground line circumferences were calculated by using beam formula $Mr = .000264 fC^3$.

Mr is moment of resistance
f is the standard fibre stress
c is circumference in inches

In all classes and lengths the 6-foot circumference is usually larger than the minimums given in the table. Stating this in another way, the average 6-foot circumference for all lengths in any class is greater than one-half the difference between the class and the minimum of the next higher class. In general, too, the average pole of a given class will be considerably stronger than the rating for the class.

The basic principles upon which ASA Specification tables have been worked out conform to and are consistent with the accepted engineering practice of the larger transmission and communication utilities.

While these simplifications and standardizations on a national scale are of great interest to our customers, we still retain a belief that they cannot replace our individual specialization of method, developed over twenty-five and more years in this particular field.

A.S.A. Circumference Tables

Western Red Cedar Poles

Minimum Circumference at 6 Feet from Butt, Inches

Length of Pole Ft.	Ground Line Dist. from Butt Ft.	Class 1	2	3	4	5	6	7	8	9	10
		Minimum Top Circumference, Inches									
		27	25	23	21	19	17	15	18	15	12
16	3½	....	....	....	....	23.0	21.5	19.5	*	*	*
18	3½	....	....	28.5	26.5	24.5	22.5	21.0	*	*	*
20	4	34.5	32.0	30.0	28.0	25.5	23.5	22.0	*	*	*
22	4	36.0	33.5	31.5	29.0	27.0	25.0	23.0	*	*	*
25	5	38.0	35.5	33.0	30.5	28.5	26.0	24.5	*	*	*
30	5½	41.0	38.5	35.5	33.0	30.5	28.5	26.5	*	*	..
35	6	43.5	41.0	38.0	35.5	32.5	30.5	28.0	*	..	..
40	6	46.0	43.5	40.5	37.5	34.5	32.0	....	..	..	..
45	6½	48.5	45.5	42.5	39.5	36.5	....	....	..	..	..
50	7	50.5	47.5	44.5	41.0	38.0	....	....	..	..	..
55	7½	52.5	49.5	46.0	42.5	39.5	....	....	..	..	..
60	8	54.5	51.0	47.5	44.0	....	....	....	..	..	..
65	8½	56.0	52.5	49.0	45.5	....	....	....	..	..	..
70	9	57.5	54.0	50.5	47.0	....	....	....	..	..	..
75	9½	59.5	55.5	52.0	48.5	....	....	....	..	..	..
80	10	61.0	57.0	53.5	49.5	....	....	....	..	..	..
85	10½	62.5	58.5	54.5	....	....	....	....	..	..	..
90	11	63.5	60.0	56.0	....	....	....	....	..	..	..

Northern White Cedar Poles

16	3½	....	....	....	....	26.0	24.0	22.0	*	*	*
18	3½	....	....	32.5	30.0	28.0	25.5	23.5	*	*	*
20	4	39.5	37.0	34.0	31.5	29.0	27.0	25.0	*	*	*
22	4	41.0	38.5	36.0	33.0	30.5	28.0	26.0	*	*	*
25	5	43.5	41.0	38.0	35.5	32.5	30.0	28.0	*	*	*
30	5½	47.5	44.5	41.5	38.5	35.5	33.0	30.5	*	*	..
35	6	50.5	47.5	44.0	41.0	38.0	35.0	32.5	*	..	..
40	6	53.5	50.0	46.5	43.5	40.0	37.0	....	..	..	..
45	6½	56.0	52.5	49.0	45.5	42.0	....	....	..	..	..
50	7	58.5	55.0	51.5	47.5	44.0	....	....	..	..	..
55	7½	61.0	57.5	53.5	49.5	46.0	....	....	..	..	..
60	8	63.5	59.5	55.5	51.5	....	....	....	..	..	..
..	....	....	....	....	....	....	....	....	..	..	..
..	....	....	....	....	....	....	....	....	..	..	..

*No butt requirement.

Creosoted Southern Yellow Pine Poles

Minimum Circumference at 6 Feet from Butt, Inches

Length of Pole Ft.	Ground Line Dist. from Butt Ft.	Class 1	2	3	4	5	6	7	8	9	10
		Minimum Top Circumference, Inches									
		27	25	23	21	19	17	15	18	15	12
16	3½	....	....	....	....	21.5	19.5	18.0	*	*	*
18	3½	....	....	26.5	24.5	22.5	21.0	19.0	*	*	*
20	4	31.5	29.5	27.5	25.5	23.5	22.0	20.0	*	*	*
22	4	33.0	31.0	29.0	26.5	24.5	23.0	21.0	*	*	*
25	5	34.5	32.5	30.0	28.0	26.0	24.0	22.0	*	*	*
30	5½	37.5	35.0	32.5	30.0	28.0	26.0	24.0	*	*	..
35	6	40.0	37.5	35.0	32.0	30.0	27.5	25.5	*	..	..
40	6	42.0	39.5	37.0	34.0	31.5	29.0	27.0	..	..	..
45	6½	44.0	41.5	38.5	36.0	33.0	30.5	28.5	..	..	..
50	7	46.0	43.0	40.0	37.5	34.5	32.0	29.5	..	..	..
55	7½	47.5	44.5	41.5	39.0	36.0	33.5	....	..	..	..
60	8	49.5	46.0	43.0	40.0	37.0	34.5	....	..	..	..
65	8½	51.0	47.5	44.5	41.5	38.5	....	....	..	..	..
70	9	52.5	49.0	46.0	42.5	39.5	....	....	..	..	..
75	9½	54.0	50.5	47.0	44.0	....	....	....	..	..	..
80	10	55.0	51.5	48.5	45.0	....	....	....	..	..	..
85	10½	56.5	53.0	49.5	....	....	....	....	..	..	..
90	11	57.5	54.0	50.5	....	....	....	....	..	..	..

Chestnut Poles

16	3½	....	....	....	....	22.5	21.0	19.5	*	*	*
18	3½	....	....	28.0	26.0	24.0	22.0	20.5	*	*	*
20	4	33.5	31.5	29.5	27.0	25.0	23.0	21.5	*	*	*
22	4	35.0	33.0	30.5	28.5	26.5	24.5	22.5	*	*	*
25	5	37.0	34.5	32.5	30.0	28.0	25.5	24.0	*	*	*
30	5½	40.0	37.5	35.0	32.5	30.0	28.0	26.0	*	*	..
35	6	42.5	40.0	37.5	34.5	32.0	30.0	27.5	*	..	..
40	6	45.0	42.5	39.5	36.5	34.0	31.5	29.5	..	..	..
45	6½	47.5	44.5	41.5	38.5	36.0	33.0	31.0	..	..	..
50	7	49.5	46.5	43.5	40.0	37.5	34.5	32.0	..	..	..
55	7½	51.5	48.5	45.0	42.0	39.0	36.0	....	..	..	..
60	8	53.5	50.0	46.5	43.5	....	....	....	..	..	..
65	8½	55.0	51.5	48.0	45.0	....	....	....	..	..	..
70	9	56.5	53.0	....	....	....	....	....	..	..	..

*No butt requirement.

Western Red and Northern White Cedar Poles

The National Pole & Treating Company supplier of Graybar Northern and Western Cedar Poles for more than 25 years has a well earned reputation for furnishing a quality product.

It maintains at the treating plants both a graduate chemist and a graduate timber pathologist who are charged with treating operations, oil analyses, yard sanitation and research, all important essentials in the manufacture of quality poles.

Pole Quality

Poles sold by the Graybar Electric Company conform to nationally accepted standards. Inspections are thorough.

Cedar presents the following qualities:

1.—Strength.
2.—Durability.
3.—Stability.
4.—Light weight.
5.—Adaptability.
6.—Appearance.
7.—Cleanliness.
8.—Availability.
9.—Safety.

Processed Cedar Poles

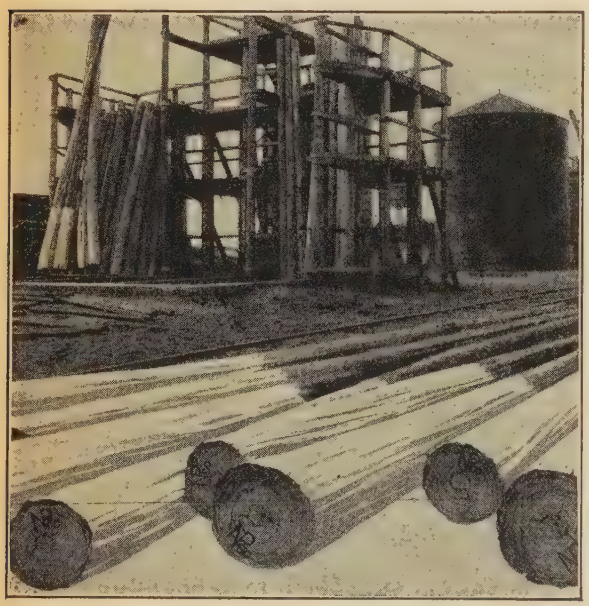
The National Pole & Treating Company maintains at its concentrating yards trained workmen who, for a small extra charge, roof, gaen and stain poles to specifications.

Cedar Pole Service

At Minneapolis, and Everett, Washington, cedar poles are concentrated, handled by steam equipment, etc. The stock runs 100,000 poles and more.

Emergency service is always available.

Preservative Treatment for Cedar Poles



One of the Butt Treating Vats Showing View of 130,000 Gallon Reserve Creosote Tank at Minneapolis Plant

Description

Years of scientific observation by engineers of the largest pole users in the United States has demonstrated that the life of cedar poles can be increased by proper open tank butt-treatment. If a satisfactory permeation is obtained in the ground line area, the life of a pole, butt-treated in creosote, will depend upon the mechanical wear of the pole above.

Unless there is a thorough and even permeation, decay will occur in small pockets and in checks through the treated wood.

Proper treatment more than doubles cedar pole value, as the original factor of safety is maintained far beyond the replacement date of the untreated pole.

Incised Treatment

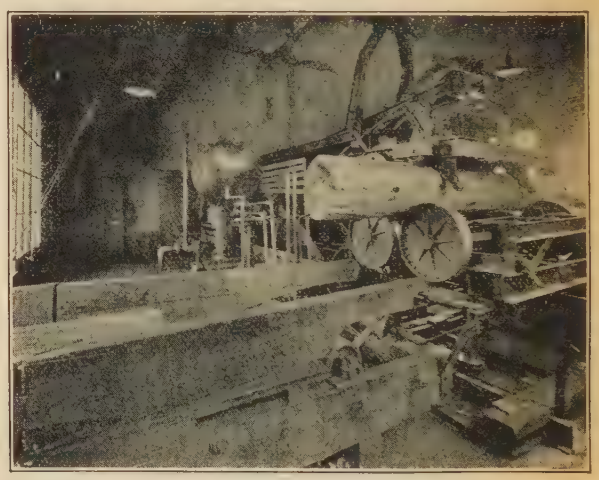
Permex Method Worth More Money

The incised treatment of cedar poles is the logical development of the open-tank process.

The preservative value of creosote has been recognized for many years and, as a treatment for cedar poles, was first applied with a brush. However, it was found that the painting did not get the creosote into the smaller and deeper season checks and cracks, so the poles were dipped into the creosote. This treatment was named AA and was specified as a continuous immersion for fifteen minutes in creosote heated to not less than 212° F., and not more than 230° F. We are still prepared to furnish AA treatment, at some initial price saving if that is in special cases what our customers wish to buy.

The penetration secured by the AA treatment was so shallow and unreliable that the time of treatment was lengthened to a period of from four to six hours in creosote ranging from 212° F. to 230° F. and an immediately succeeding bath in cold creosote for two hours at not more than 110° F. This treatment was called B. (We will on special request quote and furnish B treatment.) By this process a deeper penetration was secured and better results in service were obtained, but it was found that the absorption was irregular. In fact, in seasoned timber of apparently the same condition, some poles absorbed the creosote readily and showed a good penetration while others gave evidence of one surface treatment. Likewise, in the same pole there might be a full sapwood penetration at one point, whereas, in an area but a few inches away there might be little penetration. This uneven absorption naturally led to very uncertain results in service because, after the poles were set in line and were subjected to the various conditions of the seasons with the resultant checking and parting of the fibres, the cracks descending from the upper untreated portion of the pole entered the treated area and where they ran through the shallow treatment they opened up and exposed untreated timber. This permitted the fungi to come in direct contact with the untreated fibres with the resultant infection and rotting of the wood within the pole behind the layer of treated timber. This action proved that any treatment was only as effective as the protection given by the shallowest penetration at any point in the ground line area.

This conclusion necessitated the development of a uniformly deep permeation. Much research and experimental work was done to develop a treating process which would give this result.



Permex Machine with Pole in Position Ready for Puncturing. The Oil Lift that Raises the Lower Carriage into the Head of the Machine and Acts as a Cushion while the Machine is in Operation

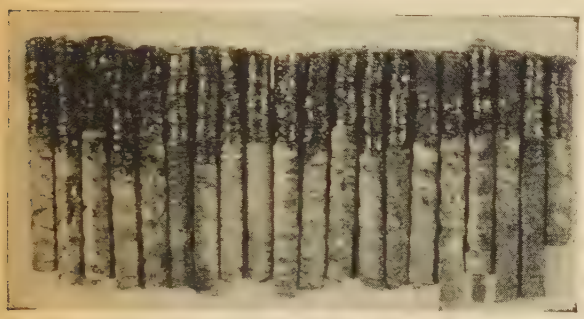
A microscopic study of cedar shows the wood to be very porous. It is made up of long, hollow longitudinal fibres which are spindle shaped cells, arranged in rings from the pith to the bark. These rings of cells form the annular rings. These fibres, besides furnishing support for the tree, provide means for the movement of the sap. Other than the longitudinal fibres are the medullary rays or cells which extend radially from the pith into the bark. There are no passages in the timber other than the cells within these longitudinal fibres and medullary rays and the sap moves from cell to cell through minute pits or pores which connect adjoining cells at their points of contact.

Western Red and Northern White Cedar Poles

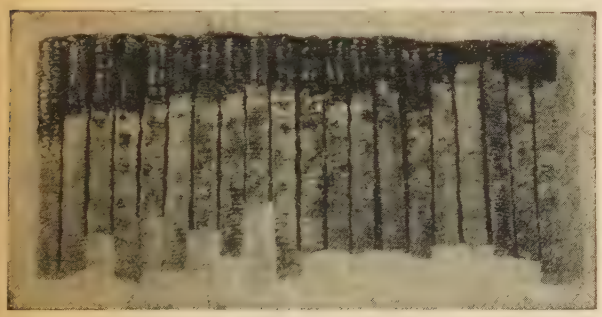
Continued

Although cedar fibre will absorb from 12 per cent to 15 per cent of its oven dry weight in water it will not absorb creosote. Examination under the microscope, of treated cedar discloses creosote within the cells but shows no absorption in the fibre. Consequently, in order to obtain penetration in cedar the movement of creosote must be by means of the openings in the cells and not through the cell fibre.

If the conditions within the timber remained unchanged after being cut, not so much difficulty would be experienced in treating it, but such is not the case. The sap is a watery solution of sugars, starches, resins, etc., and, while the tree is alive, it is constantly in solution and circulating, but, when the timber is cut, peeled and begins to season, some of the water from the sap evaporated and concentrates the sugars and resins which seal up most, if not all, of the minute pits or pores between the adjoining cells.



Average Penetration of Punctured Section, 21/32-Inch, by our Permex Method



Average Penetration, 19/32-Inch, Unscientific Hand Punctured Treatment

Incised Method of Treatment for Cedar Poles Permex for Permanency

In our Permex treatment no external pressure is applied. The movement of creosote in the cells is entirely dependent on the action of capillary attraction. This is created by first applying heated creosote ranging from 212° to 223° F. for a continuous period of eight hours, thereby vaporizing the moisture in the sapwood, causing it to expand 1/273 times its volume for every degree of heat through which it passes and partially expelling it from the timber, and then applying an immediately succeeding bath in cold creosote from 110° to 150° F. The cold treatment contracts the vapors, forms a partial vacuum within the cells and draws the surrounding creosote into the timber. This action creates an appreciable longitudinal creep or movement but does not produce much penetration radially or tangentally.

The loss in strength to a pole through incising has been determined to be in direct proportion to the percentage of the circumference cut away in a horizontal plane and to the depth of the incision.

A scientific machine for incising, therefore, must meet the existing structural conditions in cedar. Ours was designed to cut radial passages through the fibre just to the depth of the required penetration. The incisions cut the fibres and open the ends of the longitudinal cells, providing passage for the movement of creosote so that with the least amount of timber cut in a horizontal plane and with perforations only to the depth of the required penetration, a complete saturation of the fibre is obtained between all incisions.

There are many other incising machines in operation, but they have been designed with no consideration of the structure of cedar with the result that their perforations are made deeper than necessary and may be spaced so closely that the timber is weakened to a great extent, or the sapwood may be so mutilated that it is made no more than a loosely adhering shell. Even though such perforating may produce the required penetration, it is detrimental to the pole, inasmuch as the strength of the pole may be reduced and the sapwood may become a weakened shell which will not withstand the abuses of service.

Some apply incising by means of a studded belt or plate. These belts or plates are about eighteen inches long by six inches wide and contain from seventy-five to one hundred and twenty-five teeth. A mallet is used to pound the teeth into the timber. When the plate is removed, the teeth, which are binding the timber between them, tear the fibres and in some cases loosen the outer sapwood from the heartwood. It is practically impossible to obtain uniform depth of perforation and impregnation by using belts or plates because the body holding the teeth is not flexible and cannot follow the crevices and irregularities of the timber. On the other hand, the teeth of our machine are operated by automatic adjusting cams and inserted into the timber in such a way as to insure a uniform depth of perforation regardless of the uneven surface over which it has to work.

Incised Method Prevents Season Checking at Ground Line

It was thought at first that if the same penetration could be obtained in a cedar pole without perforating as with perforating, that better service results could be obtained. Experience has proven the contrary to be true. If creosote were not volatile, and if its preservative value were of indefinite existence, and if the layer or treated timber around the outside of the pole were never broken, then a creosoted area on the surface, regardless of depth of penetration, would be sufficient to preserve the pole indefinitely. It has been found, however, in green and even in seasoned poles that season checking occurs after the poles are set in line. But in perforated poles, these checks descending from the upper untreated section run out when they reach the treated perforated area. Thus the perforating protects the poles, not only in securing a deeper, more uniform impregnation, but also in providing means of relieving the stresses which cause checking in treated ground line section thereby insuring constant and complete protection against infection of the timber.

Incising Machines at Minnesota Transfer, Minn. and Everett, Washington

Two of these proper incising Permex machines are at the Minneapolis Transfer yard where the National Pole & Treating Company maintains an adequate stock of poles. A third machine is operated by the National Pole & Treating Company at Everett, Washington. These machines handle this work for us.

It is felt that studies by means of an increment borer could well be made by pole users. One large Central Station, whose engineers make such studies independent of the operating department, report informally that our Permex treatment was 30 per cent more efficient than some others.

Specification for Preservative Treatment Cedar Poles

Incised Process—A Guaranteed Penetration

A.—Seasoning

Poles shall be satisfactorily air seasoned under proper sanitary conditions.

B.—Shaving

All inner bark shall be removed from the groundline area of the pole; i.e., that portion of the pole surface terminating one foot above and two feet below the standard groundline indicated in Paragraph F. The amount of wood shaved off in the removal of the inner bark shall be limited to a minimum.

C.—Incising

All poles shall be incised throughout that portion of the pole surface terminating one foot above and two feet below the standard groundline indicated in Paragraph F. The depth of incisions shall be ½ inch. A variation of 1/32 of an inch in the depth of the incisions shall be allowed. The sapwood shall not be splintered nor loosened by the incising operation. The pattern and spacing of the incisions shall be such as to insure a uniform depth of penetration of the preservative throughout the incised area.

D.—Preservative

The preservative used shall be a distillate of coal-tar or coke-oven tar. It shall comply with the following requirements:

1.—It shall not contain more than 3% water.

2.—It shall not contain more than .5% of matter insoluble in benzol.

3.—The specific gravity of the oil at 38 degrees C. compared with water at 15.5 degrees C. shall not be less than 1.03.

4.—The distillate, based on water free oil, shall be within the following limits:
Up to 210 degrees C.—Not more than 5%.
Up to 235 degrees C.—Not more than 25%.

5.—The residue above 355 degrees C., if it exceeds 5%, shall have a float test of not more than fifty seconds at 70 degrees C.

6.—The oil shall yield not more than 2% of coke residue.

7.—The foregoing test shall be made in accordance with the standard methods of the American Wood Preservers' Association.

Treating Operations

E.—Plant Equipment

Treating plants shall be equipped with thermometers to indicate and record accurately the temperature of the preservative during all stages of treatment. The apparatus and chemicals for making necessary analyses and tests shall be available for use by the purchaser or purchaser's representative. All equipment shall be maintained in good working order.

F.—Length of Treated Sections

Poles shall be immersed in the preservative so as to completely cover the groundline area. The depth of immersion shall not exceed by more than two feet the height of treatment given in the table below. The following table shows the relationship between the height of groundline and the height of treatment from the butt end of the pole:

Length Pole Ft.	Height Groundline Ft.	Height Treatment Ft.	Length Pole Ft.	Height Groundline Ft.	Height Treatment Ft.
16	3½	4½	45	6½	7½
18	3½	4½	50	7	8
20	4	5	55	7½	8½
22	4	5	60	8	9
25	5	6	65	8½	9½
30	5½	6½	70	9	10
35	6	7	75	9½	10½
40	6	7	80	10	11

G.—Manner of Treatment

The treatment shall consist of two immersions; first, the hot immersion; second, the cold or cooling immersion.

Temperature and Duration of Hot Immersion

Poles shall be continuously immersed in the preservative at a temperature of 230 degrees F. plus or minus five degrees for not less than eight (8) hours and such period in addition thereto as will insure impregnation of the sapwood of the incised area with preservative to a depth of ½ inch. In case the sapwood of the incised area is less than ½ inch thick, the impregnation shall be to the full depth of the sapwood.

Temperature and Duration of Cold or Cooling Immersion

The preservative of the hot immersion may be allowed to cool in the treating tank or it may be replaced with cold preservative. When the preservative of the hot immersion is replaced with cold preservative, the exchange must be complete within ten minutes.

When the preservative of the hot immersion is replaced with cold preservative, the poles shall be continuously immersed in the cold preservative for a period of not less than two hours, and the temperature of the preservative for the entire period shall be between 150 degrees F. and the temperature at which solids form in the preservative.

When the preservative of the hot immersion is allowed to cool in the treating tank, the poles shall be continuously immersed in the cooling preservative at least two hours and until the temperature of the preservative has been reduced to a point between 150 degrees F. and the temperature at which solids form in the preservative. The poles shall remain immersed at this temperature for a period of not less than ten minutes.

The height of the preservative in the hot, cold, or cooling immersion shall be maintained at the same levels required in paragraph F.

H.—Impregnation

The results obtained under this specification shall be a uniform impregnation of the incised area with preservative to a depth of ½ inch, except where the thickness of the sapwood is less than ½ inch, in which case the impregnation shall be to the full depth of the sapwood. The depth of the impregnation shall be determined by testing with an increment borer at any point within the incised area. All such holes shall be filled with tight-fitting, thoroughly creosoted plugs.

Adherence to this specification results in not only the stipulated depth of impregnation, but also in a very large volume of preservative in the sapwood of the incised area, thus affording maximum protection against decay. No specific preservative content is mentioned owing to the difficulty of accurately making volume tests in the field. The presence of a large volume of preservative can be determined by observing the borings taken for penetration tests.

I.—Handling

The use of any tools which might puncture the treated wood shall not be applied within one foot above or one foot below the groundline area. See Paragraph B.

J.—Storing

Treated poles held in storage shall be piled upon treated or other non-decaying skids in a clean, well ventilated location free from vegetation and decaying wood. Skids shall be of such strength as to support the poles without producing injurious distortion of any of them, and of such height that no part of any pole shall be less than one foot above the surface of the soil.

American Standard Specifications for Western Red Cedar Poles

O—Introduction

These specifications cover western red cedar poles. The poles are to be classified in accordance with the American Standard Dimensions of Western Red Cedar Poles (05c2—1931), which is part of these specifications.

The length and class of the poles wanted shall be stated in the orders.

Poles furnished under these specifications may be either seasoned or unseasoned. If seasoned poles are specifically called for in an order, the purchaser shall specify the seasoning requirements to be met.

The details of any marking, including length and class marks, to be placed on the poles shall be in accordance with instructions from the purchaser.

Complete detailed instructions shall be given the supplier in all cases where modifications are to be made in these specifications to meet special requirements.

1.—Material Requirements

1.1—Species

All poles shall be of western red cedar (*Thuja plicata*) cut from live timber.

1.2—Prohibited Defects

All poles shall be free from sap rot, cracks, bird holes, plugged holes and injurious checks; from splits, shakes, hollow and decay in the tops; and from damage by marine borers. Nails, spikes, and other metal shall not be present in the poles unless specifically authorized by the purchaser.

1.3—Limited Defects

1.31 DEAD STREAKS.—All poles shall be free from dead streaks that are wider than one-fourth (¼) of the circumference of the pole at the point of measurement.

1.32 DECAY.—Poles shall be free from decay and from visible evidence of the presence of wood-rotting fungi except as permitted under Defective Butts.

1.33 DEFECTIVE BUTTS.—No poles shall have in the butt surface splits or checks extending from one point on the periphery to another point on the periphery and thence upward more than two (2) feet.

No pole shall have hollow heart, the diameter of which exceeds one-third (⅓) the butt diameter or the depth of which exceeds two (2) feet. The depth of hollow heart shall be measured from the butt surface.

Rot is permitted in the butt surface provided the aggregate area of rot and hollow heart does not exceed ten (10) per cent of the entire butt surface.

Complete circular shakes may be present on the butt surface provided the diameter of the ring which they follow is not more than one-third (⅓) of the diameter of the butt.

1.34 GRAIN.—No pole shall have more than one (1) complete twist of grain in any twenty (20) feet of length.

1.35 INSECT DAMAGE.—All poles shall be free from insect damage, except that pin holes circular in outline, not more than one-sixteenth (1/16) of an inch in diameter, and not greater in number than fifteen (15) in an area of four (4) square inches, are permitted.

1.36 KNOTS.—All poles shall be free from unsound knots.

The diameter of any single knot or knot cavity, or the sum of the diameters of all knots and knot cavities in any one (1) foot section, between the top and two (2) feet below the ground line, shall not exceed the limits set up in the following table. Knots and knot cavities one-half (½) of an inch or under in diameter shall be ignored in applying the limitations for sum of diameters.

Limitations of Knot Size

Length of Pole	Maximum Sizes Permitted, Inches: Diameter of any Single Knot or Knot Cavity	Sum of Diameters of All Knots and Knot Cavities in any One (1) Foot Section
All lengths	3	10

1.37—SCARS.—No part of a scar shall appear on the upper one-fourth (¼) of the length of a pole or within two (2) feet of the ground line.

Sound scars and cat faces are permitted elsewhere provided the width of the scar or cat face at its widest point is not more than one-fifth (⅕) of the circumference of the pole at that point, nor in any case more than five (5) inches.

1.38 SHAPE.—Poles shall be free from short crooks.

A pole may have sweep in the section above the ground line subject to the following limitations:

(*a*) Where sweep is in one (1) plane and (1) direction only, a straight line joining the surface of the pole at the ground line and the edge of the pole at the top shall not be distant from the surface of the pole at any point by an amount greater than one (1) inch for each six (6) feet of length between these points.

(*b*) Where sweep is in two (2) planes (double sweep) or in two (2) directions in one (1) plane (reverse sweep), a straight line connecting the mid-point at the ground line with the mid-point at the top shall not at any intermediate point pass through the external surface of the pole.

A pole may have offset in the section below ground line, provided that the projection of a straight line joining the mid-point at the top and the mid-point at the ground line does not fall outside the butt surface.

2.—Dimensions

2.1—Length

Poles under fifty (50) feet in length shall not be over three (3) inches shorter or six (6) inches longer than nominal length. Poles fifty (50) feet or over in length shall not be over six (6) inches shorter or twelve (12) inches longer than nominal length.

Length shall be measured between the extreme ends of the pole.

2.2—Circumference

Poles shall be classified in accordance with the American Standard Dimensions of Western Red Cedar Poles. This standard gives the minimum allowable circumference at six (6) feet from the butt (except for Classes 8, 9, and 10), and at the top for each length and class of pole listed, but does not preclude the acceptance of poles having greater circumference at these points of measurement than those shown. The top dimensional requirement shall apply at a point corresponding to the minimum length permitted for the pole.

3.—Manufacturing Requirements

3.1—Bark Removal

Outer bark shall be completely removed from all poles.

3.2—Sawing

All poles shall be neatly sawed at the butt and top along a plane which shall not be out of square with the axis of the pole by more than two (2) inches per foot of diameter of the sawed surface. Beveling at the edge of the sawed butt surface not more than one-twelfth (1/12) of the butt diameter in width, or an equivalent area unsymmetrically located, is permitted.

3.3—Shaving

Shaved poles shall not be furnished under these specifications unless specifically called for by the purchaser.

3.4—Trimming

Branch stubs, partially overgrown knots, and completely overgrown knots rising more than one (1) inch above the pole surface shall be trimmed close. Completely overgrown knots less than one (1) inch high need not be trimmed.

4.—Definitions of Terms

The following definitions shall apply in these specifications:

4.1—Fungous Defects

4.11 DECAY.—Decay[1] is disintegration of wood substance due to the action of wood destroying fungi. *Rot* and *Dote* mean the same as *Decay*.

4.12 HOLLOW HEART.—Hollow heart is a cavity in the heart of the pole resulting from decay.

[1]NOTE: The terms "sound" and "unsound" are used in these specifications to imply that "sound" fiber is unaffected by decay and that "unsound" fiber is or has been affected by decay.

American Standard Specifications for Western Red Cedar Poles

Continued

4.—Definitions of Terms—Continued

4.34 SCARS.—Scars or cat faces are depressions in the surface of the pole, generally elliptical in shape, resulting from wounds where healing has not re-established the normal cross section of the pole.

4.35 SHAKES.—Shakes are separations of the wood, generally parallel with the annual rings.

4.36 SPLITS.—Splits are separations between the fibers of the wood extending from surface to surface through the pole.

4.2—Insect Defects

4.21 INSECT DAMAGE.—Insect damage is the result of boring in the poles by insects or their larvae. Scoring or channeling of the pole surface is not classed as insect damage.

4.3—Timber Defects

4.31 CHECKS.—Checks are lengthwise separations of the wood in a generally radial direction.

4.32 CRACKS.—Cracks are breaks or fractures across the grain of the wood.

4.33 DEAD STREAK.[2]—A dead streak is any portion of the sapwood in which the life process had ended prior to the cutting of the tree.

[2]NOTE: A dead streak starts from the butt and differs therein from a wound, such as a cat face or scar, where the growth of new wood shows that life processes are still acting to repair the injured part.

4.4—Shape

4.41 SHORT CROOK.—A short crook is a localized deviation from straightness which, within any section of five (5) feet or less in length, is more than one-half (½) the mean diameter of the crooked section. (See Diagram 3 of the subsidiary drawing entitled "Measurement of Sweep and Short Crook in Poles.")

4.42 SWEEP.—Sweep is the deviation of a pole from straightness. (See Diagrams 1 and 2 of the subsidiary drawing entitled "Measurement of Sweep and Short Crook in Poles.")

4.5—Miscellaneous

4.51 KNOT DIAMETER.—The diameter of a knot is its diameter on the surface of the pole measured in a direction at right angles to the lengthwise axis of the pole.

4.52 LIVE TIMBER.—Live timber is that cut from a tree which was standing and living at the time of cutting.

5.—Subsidiary Drawing

The following drawing is subsidiary to the text of these specifications:

Measurement of Sweep and Short Crook in Poles.

6.—Subsidiary Standard

The following standard is subsidiary to the text of these specifications:

American Standard Dimensions of Western Red Cedar Poles (05c2—1931).

Official Manufacturing Specifications for Northern White Cedar Poles

16 Feet and Longer

1.—Live Timber

All poles must be manufactured from live, growing cedar timber in territory adjacent to the Great Lakes.

NOTE: The test of live timber is to cut into the sapwood. If the sapwood is white, the timber was alive when cut.

2.—Manufacture

All poles shall be peeled their entire length, knots trimmed close and butt and top sawed square. No poles with chopped or beveled butts will be accepted.

3.—Lengths

The length shall be measured between the extreme ends of the pole. No pole shall be over 3 inches shorter or 6 inches longer than its specified length.

4.—Top Measurements

Designated Size	Circumference Green & Watersoaked	Circumference Seasoned
4-inch top	12½ inches	12 inches
5-inch top	16 inches	15 inches
6-inch top	19½ inches	18½ inches
7-inch top	23 inches	22 inches
8-inch top	25 inches	24 inches

5.—Defects

A—Rot

Decay in the butt within three inches of the surface of the pole shall not exceed one (1) square inch in area.

Butt rot shall not exceed 5% of the area of the butt, which approximates ⅕ the diameter, in all poles 5-inch top 25 foot long and smaller and shall not exceed 8% of the area of the butt, which approximates ¼ the diameter, in all poles six inch top 25 foot long and larger.

Complete circular shakes in the butt may be present provided the area encircled by the shake does not exceed ten (10) per cent of the total butt area.

B—Top

Tops must be sound.

C—Crook

No pole shall have a short crook or bend, a crook or bend in two planes or a reverse curve. The maximum amount of sweep measured between the ground line and the top shall not be in excess of one (1) inch for each five feet of the length of the pole.

The ground line is understood to be 3½ feet from the butt on 16 and 18 foot and 4 feet from the butt on 20 foot poles, and 6 feet from the butt on poles 25 foot and longer. A pole may have sweep below the ground line provided a straight line joining the mid point at the top and the mid point at the ground line does not fall outside the butt surface.

D—Knots

All poles shall be free from unsound knots. The diameter of any single knot or knot cavity or the sum of the diameters of all knots and knot cavities in any one foot section between the top of the pole and two feet below the ground line shall not exceed the limits set up in the following table. Knots or knot cavities ½ inch or under in diameter shall be ignored in applying the limitations for sum of diameters. The diameter of a knot is its diameter on the surface of the pole measured in a direction at right angles to the lengthwise axis of the pole.

Limitations of Knot Sizes

Length of Pole	Max. sizes permitted, inches: Diameter of any single knot or knot cavity	Max. sizes permitted, inches: Sum of diameters of all knots and knot cavities in any one-foot section
35 feet and under	2.5 inches	9 inches
40 feet and over	4.5 inches	11 inches

E—Miscellaneous Defects

All poles shall be free from sap rot, bird holes, plugged holes, injurious checks and splits. No poles showing evidence of having been eaten by ants, worms or other insects shall be accepted, except that poles containing surface worm or insect marks below the ground line may be accepted.

F—Cat Faces and Scars

No part of a scar or cat face shall appear on the upper one-fourth (¼) of the length of a pole or within two (2) feet of the ground line. Sound scars and cat faces are permitted elsewhere provided the width of the scar or cat face at its widest point is not more than one-fifth of the circumference of the pole at that point nor in any case more than five (5) inches.

G—Twist

Winding twist permitted unless unsightly and exaggerated except that there shall not be more than one complete twist of grain in any 20 feet of length.

H—Maximum Defects

No poles shall contain both the maximum crook and maximum butt rot.

Table of Shipping Weights for Western Red Cedar Poles

Western Red Cedar Association Specification Size			National Electric Light Association Specification Size			American Standards Association Specification Size								
Top In.	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.
4	20	100	D	20	235	10	20	100	1	30	1000	2	55	2000
5	20	135	C	20	310	9	20	135	8	35	450	1	55	2300
6	20	190	B	20	405	8	20	180	7	35	470	4	60	1900
7	20	250	A	20	500	7	20	200	6	35	560	3	60	2000
8	20	325	D	25	310	6	20	225	5	35	650	2	60	2200
5	25	200	C	25	405	5	20	300	4	35	750	1	60	2600
6	25	250	B	25	500	4	20	400	3	35	850	4	65	2200
7	25	325	A	25	685	3	20	500	2	35	1000	3	65	2300
8	25	400	D	30	405	2	20	600	1	35	1200	2	65	2500
6	30	325	C	30	500	1	20	700	6	40	700	1	65	3200
7	30	400	B	30	685	10	25	135	5	40	800	4	70	2600
8	30	550	A	30	780	9	25	200	4	40	900	3	70	2700
9	30	650	D	35	540	8	25	225	3	40	1100	2	70	3000
6	35	450	C	35	660	7	25	250	2	40	1300	1	70	3600
7	35	550	B	35	780	6	25	320	1	40	1500	4	75	3000
8	35	650	A	35	960	5	25	400	5	45	1000	3	75	3100
9	35	800	C	40	780	4	25	480	4	45	1150	2	75	3600
7	40	675	B	40	960	3	25	600	3	45	1300	1	75	4200
8	40	800	A	40	1200	2	25	720	2	45	1550	4	80	3500
9	40	1000	B	45	1200	1	25	850	1	45	1800	3	80	3600
8	45	1000	A	45	1440	9	30	250	5	50	1300	2	80	4200
9	45	1200	B	50	1440	8	30	325	4	50	1400	1	80	5000
8	50	1200	A	50	1680	7	30	350	3	50	1550	3	85	4000
9	50	1400	B	55	1680	6	30	420	2	50	1800	2	85	4500
8	55	1400	A	55	1920	5	30	500	1	50	2000	1	85	5500
9	55	1600	B	60	1920	4	30	610	5	55	1600	3	90	4800
8	60	1600	A	60	2220	3	30	730	4	55	1600	2	90	5600
9	60	1850	B	65	2220	2	30	850	3	55	1750	1	90	6600
8	65	1850	A	65	2640									
9	65	2200	B	70	2640									
8	70	2200	A	70	3120									
9	70	2600	B	75	3120									
8	75	2600	A	75	3600									
9	75	3000	B	80	3600									
8	80	3000	A	80	4200									
9	80	3500	B	85	4200									
8	85	3500	A	85	4800									
9	85	4000	B	90	4800									
8	90	4000	..	..	....									

Minimum Weight Required for Carloads

Single Car: On 35-Foot and Shorter Poles..... 40000 Lbs.
Single Car: On 40-Foot or Mixed Loads, 40-Foot and Shorter 50000 Lbs.
Double Loads: 45-Foot and Longer or 45-Foot and Shorter.. 66000 Lbs.
Triple Loads..... 99000 Lbs.

25% over minimum required should be added to cover variation in weight.

Table of Shipping Weights for Northern White Cedar Poles

Northern White Cedar Association Specification Size						National Electric Light Association Specification Size						American Standards Association Specification Size								
Top In.	Length Ft.	Wt. Lbs.	Top In.	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.	Class	Length Ft.	Wt. Lbs.
4	16	85	6	30	350	G	20	120	E	35	540	10	16	85	5	22	420	3	35	1060
5	16	105	6½	30	350	F	20	160	D	35	540	9	16	105	4	22	500	2	35	1380
6	16	135	7	30	450	E	20	160	C	35	540	8	16	135	3	22	540	1	35	1620
7	16	165	8	30	600	D	20	230	B	35	720	7	16	135	2	22	780	6	40	740
8	16	200	5	35	375	C	20	230	A	35	1020	6	16	190	1	22	1020	5	40	790
4	18	95	5½	35	375	B	20	300	F	40	750	5	16	230	10	25	150	4	40	1020
5	18	125	6	35	450	A	20	540	E	40	750	10	18	95	9	25	200	3	40	1280
6	18	155	6½	35	450	F	22	240	D	40	750	9	18	125	8	25	250	2	40	1675
7	18	200	7	35	600	E	22	240	C	40	750	8	18	155	7	25	250	1	40	2040
8	18	325	8	35	850	D	22	300	B	40	1020	7	18	190	6	25	300	5	45	1080
4	20	100	6	40	625	C	22	300	A	40	1320	6	18	210	5	25	420	4	45	1215
4½	20	100	6½	40	625	B	22	420	E	45	1320	5	18	265	4	25	515	3	45	1535
5	20	130	7	40	850	A	22	540	D	45	1320	4	18	300	3	25	600	2	45	1970
5½	20	130	8	40	1100	G	25	180	C	45	1080	3	18	420	2	25	780	1	45	2640
6	20	190	6	45	900	F	25	240	B	45	1320	10	20	100	1	25	1020	5	50	1380
7	20	250	7	45	1100	E	25	240	A	45	1620	9	20	130	9	30	275	4	50	1470
8	20	350	8	45	1350	D	25	300	E	50	1620	8	20	190	8	30	350	3	50	1860
4	25	150	6	50	1150	C	25	300	D	50	1620	7	20	190	7	30	350	2	50	2640
5	25	200	7	50	1350	B	25	420	C	50	1380	6	20	230	6	30	420	1	50	3200
5½	25	200	8	50	1700	A	25	540	B	50	1620	5	20	300	5	30	520	5	55	1560
6	25	250	6	55	1300	F	30	420	A	50	2040	4	20	350	4	30	630	4	55	1620
6½	25	250	7	55	1700	E	30	420	E	55	2040	3	20	540	3	30	870	3	55	2260
7	25	350	8	55	2200	D	30	420	D	55	2040	2	20	600	2	30	1170	2	55	2960
8	25	450	7	60	2200	C	30	420	C	55	1560	1	20	720	1	30	1320	1	55	3800
5	30	275	8	60	2500	B	30	540	B	55	2040	10	22	150	7	35	450	4	60	2200
5½	30	275	...	..	....	A	30	720	A	55	2640	9	22	200	6	35	510	3	60	2640
						F	35	540	..	..	....	8	22	225	5	35	720	2	60	3460
												7	22	225	4	35	820	1	60	4500
												6	22	315	..	..	....	.	..	....

Minimum Weight Required for Carloads

Single Cars..... 30000 Lbs. Double Loads (Poles Requiring 2 Cars)..... 60000 Lbs.

International Creosoted Pine Poles

Old Lines of International Creosoted Pine Poles—25 Years in Service
In Above Lines—6712 Poles—½ of 1 Per Cent Replaced to Date (1933)

General

Graybar Electric Company brings to the utility trade the highest quality in creosoted pine poles and offers for support of this statement the fact that its supplier has more long-time service records of poles without failures than any creosoting concern. Low annual cost, reliability, the fact that in times of financial stress or weather hazard the utility company *needs lines that will stand without failure,* all of these have dominated us in our creosoted pine pole policy.

International As A Supplier

Our supplier, International Creosoting and Construction Company, organized in 1875 and one of the largest commercial creosoting concerns in the business, has an outstanding record and a dominant place in the treating industry. We call special attention to the records of old and new lines cited in this concern's photographs here shown. They are typical, and a few of the many available.

Operating in one of the finest timber-producing areas in the South-West, International has added to its advantages of location and natural resources the skill of graduate chemical engineers and treating operators whose work is conducted in modern plants and well equipped laboratories. Pioneered and trained by a background of 58 years experience, International timbermen select the cream of the timber area (surpassing even the quality of the lumber logging operations) for the manufacture of Graybar-International poles. This production moves to conditioning yards at the treating plants by means of a highly developed and well organized concentrating system. The yards themselves have been built in conformity with Government seasoning recommendations.

Always using only one grade, and that the best grade of creosote in the treatment of its poles, and standing against every tendency towards departures in quality or reduction in quantity of the preservative that would make of the user's line an experimental laboratory, Graybar-International creosoted pine poles have gone to almost every state of the Union and without exception have given outstanding service.

Reasons For The Standing Of The International Pine Pole

1—Long Life
2—Low Annual Cost
3—Great Strength
4—Lasting Strength
5—Cleanliness
6—Fire Resistant
7—Bird Resistant
8—Termite Resistant

The utilities of the United States use more creosoted pine than all other treated poles put together. Only briefly need their qualifications be given to account for this preference. The tall straight pine trees of the South are natural poles. They grow with a gradually tapering stem, practically without branches, and when sheared of their bark and browned as the result of treatment, they present a stately appearance in the line. Their wood is the strongest of the poles commonly used in line construction. Fortunately pine is a wood into which creosote goes very deeply during the course of scientifically controlled and proper treating operation, and the depth of this protection is the reason for the exceedingly long life of the pine pole. It is the explanation also of pine's resistance to termite attacks, for the checks which open in every wood and expose it to the ravages of these insects do not go past the deep creosote penetration in the pine pole. Modern methods and advances in the science of wood preservation now makes available the creosoted pine pole so well manufactured in appearance, and with surface so clean that they are in use on the streets of New York, Detroit, Los Angeles, St. Louis, Baltimore, Boston, San Francisco, and thousands of other cities.

American Standards Association Specifications for Southern Pine Poles

Approved June 20, 1931

ASA

Introduction

These specifications cover southern pine poles which are to be given a preservative treatment. The poles are to be classified in accordance with the American Standard Dimensions of Creosoted Southern Pine Poles (05e2–1931), which is a part of these specifications.

The length and class of poles wanted and full details of the framing desired shall be stated in the orders.

The details of any marking, including length and class marks, to be placed on the poles shall be in accordance with instructions from the purchaser.

Complete detailed instructions shall be given the supplier in all cases where modifications are to be made in these specifications to meet special requirements.

1.—Material Requirements

1.1—Species

All poles shall be cut from live southern pine timber: Longleaf Pine (Pinus palustris), Shortleaf pine (Pinus echinata), Loblolly Pine (Pinus taeda), Slash Pine (Pinus caribaea), and Pond Pine (Pinus rigida serotina).

1.2—Prohibited Defects

All poles shall be free from decay, red heart, cracks, plugged holes, and bird holes. Nails, spikes, and other metal shall not be present in the poles unless specifically authorized by the purchaser.

1.3—Permitted Defects

1.31 Blue Sap Stain.—Blue sap stain that is not accompanied by softening or other disintegration of the wood (decay) is permitted under these specifications.

1.32 Hollow Pith Centers.—Hollow pith centers in the tops or butts of poles and in knots are permitted.

1.4—Limited Defects

1.41 Checks.—The top and side surfaces of poles shall be free from injurious checks.

1.42 Shakes.—Shakes in the butt surface extending over not more than one-quarter (¼) of the circumference are permitted provided they are at least one (1) inch distant from the edge of the butt. Shakes extending over more than one-quarter (¼) of the circumference are permitted when they are inside of a circle whose center corresponds to the center of the butt surface and whose diameter equals one-half (½) of the average butt diameter.

International Creosoted Pine Poles

New Lines of International Creosoted Pine Poles—10 Years in Service
In Above Lines—4026 Poles—No Replacements to Date (1933)

Specifications for Southern Pine Poles

Continued

Shakes in the top surface whose width does not exceed one-sixteenth (1/16) of an inch are permitted provided they do not extend over more than one-half (1/2) of the top circumference.

1.43 Splits.—Splits are prohibited in the top surfaces of poles. Splits in butt surfaces are permitted provided that their height from the butt along the side surfaces does not exceed two (2) feet.

1.44 Grain.—No pole shall have more than one (1) complete twist of grain in any twenty (20) feet of length.

1.45 Insect Damage.—Insect damage consisting of holes less than one sixteenth (1/16) of an inch in diameter is permitted.

1.46 Knots.—The diameter of any single knot or knot cavity, or the sum of the diameters of all knots and knot cavities in any one (1) foot section shall not exceed the limits set up in the following table. Knots and knot cavities one-half (1/2) of an inch or under in diameter shall be ignored in applying the limitations for sum of diameters.

Limitations of Knot Size

	Maximum Sizes Permitted, Inches		
	Diameter of Any Single Knot or Knot Cavity		Sum of Diameters of All Knots and Knot Cavities in Any 1 Foot Section
Length of Pole	Classes 1-3	Classes 4-10	All Classes
45 Ft. and Under	4	3	8
50 Ft. and Over	5	5	10

Knots one (1) inch or over in diameter, showing discoloration or softness of fibre, indicating possible decay, shall be neatly gouged to a depth of not more than one-fifth (1/5) of the diameter of the pole at the point where the knot is located, to permit determination of the character and extent of decay. The gouging shall be done without unnecessary removal of sound wood, and in such a manner as to insure drainage of water from the hole when the pole is set. Where such gouging does not completely remove the decay (heart rot), the pole shall be rejected.

Knots under one (1) inch in diameter need not be gouged unless after trimming the presence of decay is revealed and upon further examination the decay is found to extend to a depth of more than two (2) inches.

When more than one (1) cavity is present in a pole, the sum of the depths of all cavities in the same six (6) inch longitudinal section of the pole shall not exceed one-third (1/3) of the mean diameter of that section.

1.47 Scars.—No pole shall have a turpentine face or other scar located within two (2) feet of the ground line.

In other sections of the pole, scars which have been smoothly trimmed so as to remove all bark and all surrounding or overhanging wood that is not completely intergrown with the wood of the body of the pole are permitted, provided

(a) that such trimming does not result in abrupt changes in the contour of the pole surface and that trimmed scar does not have a depth of more than one (1) inch, except that where the diameter of the pole at the location of the scar is more than ten (10) inches the depth may be one-tenth (1/10) of the diameter; and

(b) that the circumference of the pole at any point on trimmed surfaces located between the butt and a point two (2) feet below the ground line is not less than the circumference of the pole at the ground line.

1.48 Shape.—Poles shall be free from short crooks.

A pole may have sweep subject to the following limitations:

(a) Where sweep is in one (1) plane and one (1) direction only, a straight line joining the surface of the pole at the ground line and the edge of the pole at the top shall not be distant from the surface of the pole at any point by an amount greater than one (1) inch for each six (6) feet of length between these points.

(b) Where sweep is in two (2) planes (double sweep) or in two (2) directions in one (1) plane (reverse sweep), a straight line connecting the mid-point at the ground line with the mid-point at the top shall not at any intermediate point pass through the external surface of the pole.

2.—Dimensions

2.1—Length

Poles under fifty (50) feet in length shall not be over three (3) inches shorter or six (6) inches longer than nominal length. Poles fifty (50) feet or over in length shall not be over six (6) inches shorter or twelve (12) inches longer than nominal length.

Length shall be measured between the extreme ends of the pole.

2.2—Circumference

Poles shall be classified in accordance with the American Standard Dimensions of Creosoted Southern Pine Poles. Minimum allowable circumferences at six (6) feet from the butt (except for Classes 8, 9, and 10), and at the top, for each length and class of pole listed, are shown in this standard. Poles having circumferences which are greater, at the same points of measurement, than those shown for the length and class desired, shall be acceptable, provided that the six (6) foot from butt circumference is less than the minimum given for the second larger class pole of the same length. The top dimensional requirement shall apply at a point corresponding to the minimum length permitted for the pole.

International Creosoted Pine Poles

Specifications for Southern Pine Poles

Continued

Dimensions of Creosoted Southern Pine Poles

Lgth. of Pole Ft.	Ground Line Dist. from Butt Feet	Class 1	2	3	4	5	6	7	*8	*9	*10
		Minimum Top Circumference, Inches									
		27	25	23	21	19	17	15	18	15	12
		Minimum Circumference at 6 Feet from Butt, Inches									
16	3½	....	....	....	....	21.5	19.5	18.0	..	..	..
18	3½	....	....	26.5	24.5	22.5	21.0	19.0	..	..	..
20	4	31.5	29.5	27.5	25.5	23.5	22.0	20.0	..	..	.
22	4	33.0	31.0	29.0	26.5	24.5	23.0	21.0	..	..	..
25	5	34.5	32.5	30.0	28.0	26.0	24.0	22.0	..	..	..
30	5½	37.5	35.0	32.5	30.0	28.0	26.0	24.0	..	..	..
35	6	40.0	37.5	35.0	32.0	30.0	27.5	25.5	..	..	..
40	6	42.0	39.5	37.0	34.0	31.5	29.0	27.0	.	..	..
45	6½	44.0	41.5	38.5	36.0	33.0	30.5	28.5	..	.	..
50	7	46.0	43.0	40.0	37.5	34.5	32.0	29.5	..	..	..
55	7½	47.5	44.5	41.5	39.0	36.0	33.5	....	..	..	..
60	8	49.5	46.0	43.0	40.0	37.0	34.5	....	..	..	..
65	8½	51.0	47.5	44.5	41.5	38.5	....	....	..	..	..
70	9	52.5	49.0	46.0	42.5	39.5	....	....	..	..	..
75	9½	54.0	50.5	47.0	44.0	....	....	....	..	..	..
80	10	55.0	51.5	48.5	45.0	....	....	....	..	..	..
85	10½	56.5	53.0	49.5	....	....	....	....	..	..	..
90	11	57.5	54.0	50.5	....	....	....	....	..	..	..

*No butt requirement on Classes 8, 9 and 10.

3.—Manufacturing Requirements

3.1—Bark Removal

Outer bark shall be completely removed from all poles.

No patch of inner bark left on the pole surface shall be more than one quarter (¼) of an inch in width or more than four (4) inches long.

3.2—Sawing

All poles shall be neatly sawed at the butt along a plane which shall not be out of square with the axis of the pole by more than two (2) inches per foot of diameter of the sawed surface. Beveling at the edge of the sawed butt surface not more than one-twelfth (1/12) of the butt diameter in width, or an equivalent area unsymmetrically located, is permitted.

3.3—Trimming

Branch stubs, partially overgrown knots, and completely overgrown knots rising more than one (1) inch above the pole surface shall be trimmed close. Completely overgrown knots less than one (1) inch high need not be trimmed.

3.4—Framing

All poles shall be framed in accordance with the terms of the order before they are subjected to the preservative treatment.

Gains on poles showing sweep or curvature shall be located on the concave side in the plane of the greatest curvature.

All gains on the same pole shall be cut so that their flat surfaces are approximately parallel. Conformance to this requirement may be tested by placing straight edges thirty (30) inches long on the faces of the finished gains so that the ends of the straight edges extend fifteen (15) inches on either side of the center line of the pole. The straight edges in any two (2) gains, when sighted in the direction of the longitudinal axis of the pole, shall not be out of parallel at their ends by more than one-sixteenth (1/16) of an inch. Bolt holes shall be bored perpendicular to the faces of the gains.

4.—Storage and Handling

4.1—Storage

When it is necessary for any reason to hold in storage poles offered under these specifications, they shall be stacked on creosoted or non-decaying skids of such dimensions and so arranged as to support the poles without producing noticeable distortion of any of them. Poles shall be piled in such a manner as to permit free circulation of air and they shall be supported at all points at least one (1) foot above the general ground level, or any vegetation growing thereon. No decayed or decaying wood shall be permitted to remain underneath stored poles.

4.2—Handling

Pole tongs, cant hooks, and other pointed tools capable of producing indentations of more than one (1) inch in depth shall not be used on poles furnished under these specifications.

5.—Definitions of Terms

The following definitions shall apply in these specifications:

5.1—Fungous Defects

5.11 Blue Sap Stain.—Blue sap stain is a bluish coloration in the sapwood, caused by the action of certain molds and fungi, that is not accompanied by softening or other disintegration of the wood.

5.12 Decay.—Decay is disintegration of wood substance due to the action of wood-destroying fungi. Rot and Dote mean the same as Decay.

5.13 Red Heart.—Red heart is the incipient stage of a destructive heart rot caused by *Trametes pini* that occurs in the living tree. It is characterized by a reddish or brownish color in the heartwood.

5.2—Insect Defects

5.21 Insect Damage.—Insect damage is the result of boring in the pole by insects or their larvae. Scoring or channeling of the pole surface is not classed as insect damage.

5.3—Timber Defects

5.31 Checks.—Checks are lengthwise separations of the wood in a generally radial direction.

Heart checks are checks which extend from the pith center of the pole toward but not to the periphery of the pole.

5.32 Cracks.—Cracks are breaks or fractures across the grain of the wood.

5.33 Scars.—Scars or cat faces are depressions in the surface of the pole, generally elliptical in shape, resulting from wounds where healing has not re-established the normal cross section of the pole.

5.34 Shakes.—Shakes are separations of the wood, generally parallel with the annual rings.

5.35 Splits.—Splits are separations between the fibers of the wood extending from surface to surface through the pole.

5.4—Shape

5.41 Short Crook.—A short crook is a localized deviation from straightness which, within any section of five (5) feet or less in length, is more than one-half (½) the mean diameter of the crooked section. (See Diagram 3 of the subsidiary drawing entitled "Measurement of Sweep and Short Crook in Poles.")

5.42 Sweep.—Sweep is the deviation of a pole from straightness. (See diagrams 1 and 2 of the subsidiary drawing entitled "Measurement of Sweep and Short Crook in poles.")

5.5—Miscellaneous

5.51 Knot Diameter.—The diameter of a knot is its diameter on the surface of the pole measured in a direction at right angles to the lengthwise axis of the pole.

5.52 Live Timber.—Live timber is that cut from a tree which was standing and living at the time of cutting.

6.—Subsidiary Drawing

The following drawing is subsidiary to the text of these specifications:

Measurement of Sweep and Short Crook in Poles.

7.—Subsidiary Standard

The foregoing dimension table is subsidiary to the text of these specifications: It is designated as:

American Standard Dimensions of Creosoted Southern Pine Poles (05e2–1931).

International Creosoted Pine Poles

Measurement of Sweep and Short Crook in Poles

Diagram 1—Measurement of Sweep in One Plane and One Direction

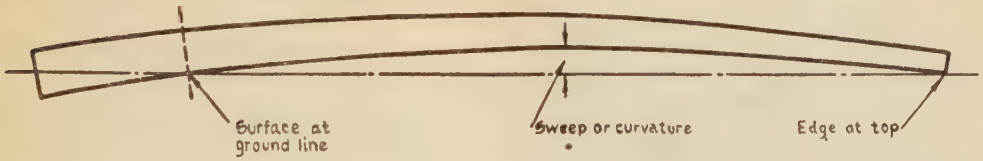
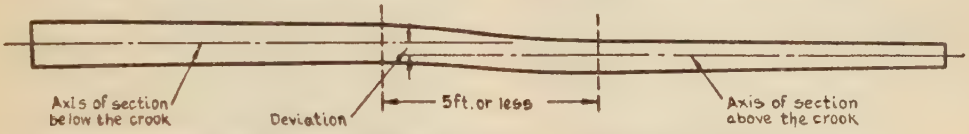


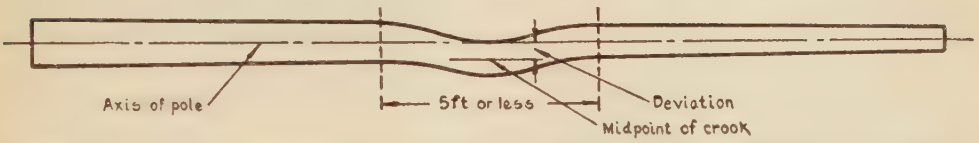
Diagram 2—Measurement of Sweep in 2 Planes (Double Sweep) or in 2 Directions in One Plane (Reverse Sweep)

NOTE: Diagram No. 2 applies to the measurement of double sweep in Western Red Cedar and Southern Pine Poles. For measurement of double sweep in Northern White Cedar and Chestnut Poles, see text.

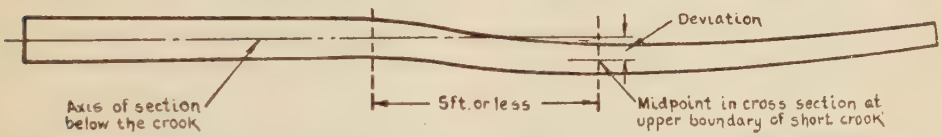
Diagram 3—Measurement of Short Crook (Three Cases Shown)



Case 1—Where the Reference Axes are Approximately Parallel



Case 2—Where Axes of Sections above and below the Crook Coincide or are Practically Coincident

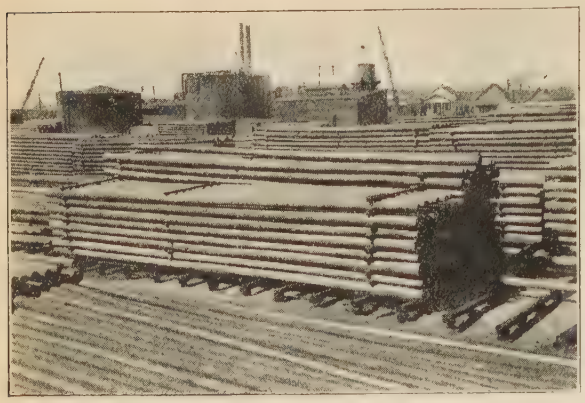


Case 3—Where Axis of Section above Short Crook is not Parallel or Coincident with Axis below the Crook

NOTE: The three cases shown under Diagram 3 are typical and are intended to establish the principle of measuring short crooks. There may be other cases not exactly like those illustrated.

International Pine Poles have the Straightness and Symmetry of a Machined Product

International Creosoted Pine Poles



Stacks Such as Here Shown on One of International's Conditioning Yards Make Possible Our Quick Shipment of Quality Creosoted Pine Poles

Top Dimension Poles

Top dimension poles conform in all respects to American Standards Association Specification poles, with the sole difference that top diameter poles specify minimum top diameter only; whereas A. S. A. Specification poles specify both minimum top circumference and circumference six feet from the butt.

Length Feet	Top Diameter in Inches*						
16	4–5	5–6	6–7	...	...	....	.....
18	4–5	5–6	6–7	...	...	....	.....
20	4–5	5–6	6–7	7–8	...	....	.....
25	4–5	5–6	6–7	7–8	8–9	....	.....
30	...	5–6	6–7	7–8	8–9	....	.....
35	...	5–6	6–7	7–8	8–9	....	.....
40	...	...	6–7	7–8	8–9	9–10	.....
45	...	...	6–7	7–8	8–9	9–10	.....
50	...	...	...	7–8	8–9	9–10	.....
55	...	...	...	7–8	8–9	9–10	.....
60	...	...	...	7–8	8–9	9–10	10–11
65	...	...	...	7–8	8–9	9–10	10–11
70	...	...	...	7–8	8–9	9–10	10–11
75	...	...	...	7–8	8–9	9–10	10–11

Anchor Logs

Anchor logs conform in all respects to the specification for top dimension poles.

3	...	5–6	6–7	7–8	8–9	9–10	.....
4	...	5–6	6–7	7–8	8–9	9–10	.....
5	...	5–6	6–7	7–8	8–9	9–10	.....
6	...	5–6	6–7	7–8	8–9	9–10	.....
7	...	5–6	6–7	7–8	8–9	9–10	.....
8	...	5–6	6–7	7–8	8–9	9–10	.....
9	...	5–6	6–7	7–8	8–9	9–10	.....

*Note: Top diameter is determined by placing a tape around the circumference of the pole at the base of the roof.

What an Order Should Show

To avoid delays and prevent the possibility of error, an inquiry or an order for International poles should contain the following information:

1.—Name of consignee.
2.—Destination of shipment.
3.—Date shipment is desired.
4.—Number of poles required.
5.—Length and minimum top diameter.
6.—Number of pounds of creosote required per cubic foot of wood.
7.—Type of framing desired. A blue print or sketch is preferable. Poles can be framed more economically at a treating plant than in the field at point of installation. Insofar as possible therefore complete framing instructions are desirable.

*Specification for the Preservative Treatment of Southern Yellow Pine Poles

Rueping Empty Cell Process

*Note: A descriptive specification only. It must be recognized that specifications do not guarantee quality, and should not be regarded as adequate protection to the buyer. In any treated wood, the all important factor is the source of supply.

General

The following specification is intended to obtain an empty cell treatment for the poles; and if the material to be treated is in a different condition as to moisture and seasoning, material for each retort charge shall be selected as to condition of moisture so that there will be no great difference in degree of seasoning in any one charge. Only perfectly sound poles shall be treated. The treating plant shall be equipped with indicating and recording gauges and other necessary apparatus for accurately observing and recording the treating process. Above the level of the creosoting cylinder there shall be an overhead drum for the purpose of determining that the cylinder is full of preservative and free from air and the gauge reading indicating a full cylinder shall not be taken until the preservative is seen to overflow through the valve on top of this drum; there shall also be a sap drum below the level of the cylinder by means of which sap and condensation shall be removed regularly. The treating plant must have all the necessary chemicals, a laboratory and laboratory apparatus to enable the quality of preservative to be determined.

Seasoning

Air-Seasoning

In air-seasoning, the poles shall be stacked in such a manner as to provide free air circulation and minimum contact between individual pieces in each stack. These stacks shall be placed on treated or otherwise permanent skids at least six inches above the ground on a well drained storage yard free from vegetation and decaying wood, so located that prevailing winds strike it freely, and each layer shall be separated by creosoted strips. Alleys between the stacks shall be wide, continuous and straight. The material shall remain until in the judgment of the inspector it is sufficiently seasoned to obtain the maximum benefit from the treatment.

Seasoning By Steam

When time for air-seasoning is not available, steam seasoning shall be used. Live, saturated steam shall be admitted to the treating cylinder taking care that all air is swept from the cylinder before the outlet valve is closed. Pressure shall then be raised gradually to the maximum temperature desired, this maximum being determined by the treating inspector. It should not be less than 259° F., not more than 270° F. The duration of the steaming process is dependent upon the degree of seasoning of the poles in the cylinder charge but shall in no case be carried to such an extent as to injure the timber.

Initial Vacuum

After the steaming process has been completed the steam shall be blown off and the treating cylinder exhausted as quickly as possible to as high a vacuum as possible, which must be at least twenty-four inches at sea level or proportionately less at higher altitudes. This vacuum shall be maintained for at least one hour or for whatever longer period is necessary, so that the wood may be as dry and free from air as practicable. During the exhaustion process the temperature within the treating cylinder shall be maintained by means of steam under pressure in the closed coils. The cylinder shall be relieved of sap and condensation continuously.

International **Creosoted Pine Poles**

Specification for the Preservative Treatment of Southern Yellow Pine Poles

Seasoning—Continued

Initial Air Pressure

In the case of air-seasoned poles, Initial Air Pressure is the first step in the treating process. With steam-seasoned poles this step immediately follows the Initial Vacuum.

The poles shall be subjected to air pressure of sufficient intensity and duration (usually 40 lbs. to 70 lbs.) to provide under a quick high vacuum the ejection of surplus preservative, and to insure a retention and proper distribution of the stipulated number of pounds of preservative per cubic foot of wood.

Treatment

The creosote shall be introduced between 170° F. and 210° F., the cylinder pressure being maintained constant until the cylinder is filled. The oil must be seen by the inspector to flow from the overhead drum on top of the treating cylinder, thus assuring him that the cylinder is completely filled with the preservative. The pressure shall then be gradually raised to and maintained at a minimum of 150 lbs. per square inch until there is obtained the largest gross absorption that can be reduced to the stipulated final retention, calculation being based on readings of the working tank gauges and the weight of the creosote at 100° F. The quantity of oil for final retention shall be based on the cubic content of wood in the treating cylinder as determined by actual measurement of the top and butt of each pole in each charge. Under no conditions may shortage of oil in one charge be offset by overage in another; the minimum final retention in each case must be 100 per cent of the quantity of creosote specified.

Final Vacuum

After pressure is completed and the cylinder is emptied of oil a sufficient vacuum shall be promptly created and maintained until the timber can be removed from the cylinder free from dripping oil.

Preservative

For preservative see Creosote Specification.

NOTE: A final retention of 8, 10 or 12 pounds of creosote per cubic foot are most frequently used. Of these, the 8-pound treatment is specified in the great majority of cases.

Standard Specifications for Creosote Oil

American Wood Preservers Association

Grade 1

1.—The oil shall be a distillate of coal-gas tar or coke-oven tar.[1] It shall comply with the following requirements:

2.—It shall not contain more than three per cent of water.

3.—It shall not contain more than 0.5 per cent of matter insoluble in benzol.[2]

4.—The specific gravity of the oil at 38° C., compared with water at 15.5° C., shall be not less than 1.03.

5.—The distillate, based on water-free oil, shall be within the following limits:

Up to 210° C., not more than 5 per cent.
Up to 235° C., not more than 25 per cent.

6.—The residue above 355° C., if it exceeds 5 per cent shall have a float test of not more than 50 seconds at 70° C.

7.—The oil shall yield not more than 2 per cent of coke residue.

8.—The foregoing tests shall be made in accordance with the standard methods of the American Wood-Preservers' Association. (See Manual—Creosote, Analysis.)

[1]Owing to the complexity of the chemical composition and physical properties of coal-tar creosote oil, and to the fact that some of the same compounds and properties which characterize coal-tar creosote are found in certain petroleum derivatives, the determination of the purity of creosote oil is difficult. When there is not certain assurance that the oil is a pure product, the following tests will aid in arriving at an opinion as to its coal-tar origin:

A.—Fraction distilling between 210° and 235° C. is usually solid or contains some solids when cooled to 25° C.

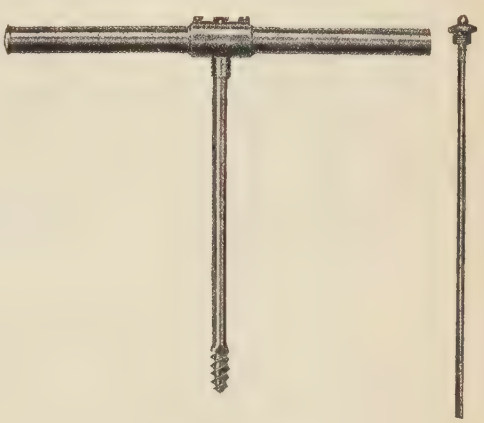
B.—All of the fractions up to 315° C. contain tar acids in varying amounts, usually at least 1 per cent calculated on the amount of the fraction tested. (See Manual—Creosote, Analysis, Tar Acids.)

C.—The specific gravity of the fraction between 235° and 315° C. is usually not lower than 1.025 and specific gravity of the fraction between 315° and 355° C. is usually not lower than 1.085 at 38° C. compared with water at 15.5° C. However, some pure coal-tar distillates fall slightly below these limits.

If the oil does not comply with at least one of the foregoing tests it is undoubtedly not a pure coal-tar creosote.

[2]Samples of oil taken from working tanks may show an increase in matter insoluble in benzol due to treating operations. Such increases provided they do not exceed by 1 per cent the specification limits should not serve to cause rejection of the oil for non-conformity with specifications if it can be shown that the original fresh oil was of specified quality.

Depth of Creosote Penetration



Increment Borer

The increment borer shown here is used for extracting sections of wood from poles to determine how deeply the preservative has penetrated into the wood.

The use of this instrument is recommended as one means by which the buyer can gauge the quality of the product he receives. It does not damage the pole and the only precaution is that a creosoted wood plug be driven into the hole after the boring has been extracted.

For adequate protection it is essential that creosote penetrates wood deeply (see discussion on penetration later in this section).

Prices for increment borers, on request.

International Creosoted Pine Poles

Estimated Weights of Poles

American Standards Association Specification Poles

8 Pounds Final Retention

Length Pole Feet	Estimated Weights in Pounds — A.S.A. Size Group 1	2	3	4	5	6	7	8	9	10
16	....	....	....	....	254	212	179	240	179	122
18	....	....	409	363	301	263	216	277	212	141
20	635	555	479	418	353	310	259	315	235	169
25	898	808	686	602	508	423	362	423	324	221
30	1241	1076	921	780	672	573	489	541	423	...
35	1603	1410	1213	996	865	733	616	682	...	...
40	1974	1734	1499	1260	1048	884	761	...	...	...
45	2369	2087	1772	1528	1250	1062	921	...	...	...
50	2820	2435	2068	1777	1476	1246	1081	...	...	...
55	3220	2801	2411	2077	1739	1481	....	...	...	...
60	3798	3187	2750	2298	1988	1683	....	...	...	...
65	4362	3628	3163	2646	2265	....	....	...	...	...
70	4874	4145	3502	2947	2538	....	....	...	...	...
75	5429	4644	3892	3285	....	....	....	...	...	...

10 Pounds Final Retention

16	....	....	....	....	262	218	184	247	184	126
18	....	....	422	364	310	272	223	286	218	146
20	655	572	495	432	364	320	267	325	243	175
25	926	834	708	621	524	437	373	437	335	228
30	1280	1111	951	805	694	592	504	558	437	...
35	1654	1455	1251	1028	892	757	635	703	...	...
40	2037	1790	1547	1300	1082	912	786	...	...	...
45	2444	2153	1828	1576	1290	1096	951	...	...	...
50	2910	2512	2134	1833	1523	1285	1116	...	...	...
55	3322	2891	2488	2144	1795	1528	....	...	...	...
60	3919	3288	2837	2372	2052	1736	....	...	...	...
65	4501	3744	3264	2731	2338	....	....	...	...	...
70	5029	4278	3613	3041	2619	....	....	...	...	...
75	5602	4792	4016	3390	....	....	....	...	...	...

12 Pounds Final Retention

16	....	....	....	....	270	225	190	255	190	130
18	....	....	435	375	320	280	230	295	225	150
20	675	590	510	445	375	330	275	335	250	180
25	955	860	730	640	540	450	385	450	345	235
30	1320	1145	980	830	715	610	520	575	450	...
35	1705	1500	1290	1060	920	780	655	725	...	...
40	2100	1845	1595	1340	1115	940	810	...	...	...
45	2520	2220	1885	1625	1330	1130	980	...	...	...
50	3000	2590	2200	1890	1570	1325	1150	...	...	...
55	3425	2980	2565	2210	1850	1575	....	...	...	...
60	4040	3390	2925	2445	2115	1790	....	...	...	...
65	4640	3860	3365	2815	2410	...	....	...	...	...
70	5185	4410	3725	3135	2700	....	....	...	...	...
75	5775	4940	4140	3495	....	....	....	...	...	...

Top Dimension Poles

8 Pounds Final Retention

Length Pole Feet	Estimated Weights in Pounds — Top Diameter, Inches 4–5	5–6	6–7	7–8	8–9	9–10	10–11
16	113	164	226	....	....	....	....
18	146	207	277	....	....	....	....
20	160	226	306	400	....	....	....
25	226	316	418	536	672	....	....
30	...	408	541	686	855	....	....
35	...	522	682	855	1058	....	....
40	...	...	857	1048	1278	1537	....
45	...	...	1011	1255	1523	1824	....
50	...	...	....	1485	1791	2129	....
55	...	...	....	1734	2082	2463	....
60	...	...	....	2012	2402	2825	3285
65	...	...	....	2312	2740	3210	3722
70	...	...	....	2636	3111	3628	4188
75	...	...	....	2989	3511	4075	4686

10 Pounds Final Retention

16	116	169	233	....	....	....	....
18	150	213	286	....	....	....	....
20	165	233	315	412	....	....	....
25	233	325	431	553	693	....	....
30	...	421	558	708	882	....	....
35	...	538	703	882	1091	....	....
40	...	...	873	1081	1319	1586	....
45	...	...	1043	1295	1571	1882	....
50	...	...	....	1532	1848	2197	....
55	...	...	....	1789	2148	2541	....
60	...	...	....	2076	2478	2915	3390
65	...	...	....	2386	2827	3312	3841
70	...	...	....	2720	3210	3744	4321
75	...	...	....	3084	3623	4205	4835

12 Pounds Final Retention

16	120	175	240	....	....	....	....
18	155	220	295	....	....	....	....
20	170	240	325	425	....	....	....
25	240	335	445	570	715	....	....
30	...	435	575	730	910	....	....
35	...	555	725	910	1125	....	....
40	...	...	890	1115	1360	1635	....
45	...	...	1075	1335	1620	1940	....
50	...	...	....	1580	1905	2265	....
55	...	...	....	1845	2215	2620	....
60	...	...	....	2140	2555	3005	3495
65	...	...	....	2460	2915	3415	3960
70	...	...	....	2805	3310	3860	4455
75	...	...	....	3180	3735	4335	4985

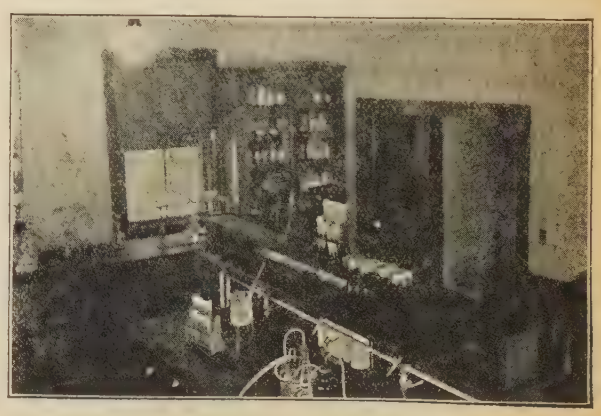
Characteristics of Quality Pine Poles

Status of Pine Poles

During a period covering the last several years, more treated pine poles have been used than all other treated poles put together. The utility that uses this commodity therefore is using the most generally accepted pole of the utility field. Important lines *that must stand up* under greatest stress and for the longest period of time are well built when built with quality-creosoted pine poles. Every sleet storm brings a further degree of proof of this fact. Bearing in mind the salvage value even of an abandoned line of creosoted pine poles, the costliness of individual pole failures, and creosoted pine's comparatively low annual cost, it seems difficult to think of any line not sufficiently important to justify their use.

Life of Creosoted Pine Poles

Whole lines of creosoted pine poles furnished by our supplier 25 and 30 years ago are still in use with practically no replacements, and are obviously good for many years to come. Many estimates have been made of the life to expect, and the Pennsylvania Electric Association, as the result of a study, estimated 35 years. This figure seems conservative with so many International creosoted pine lines now approaching that age and still in good condition. The oldest lines still standing, and differences in climatic conditions, make it impossible to forecast definitely just what life to expect from the creosoted pine pole.

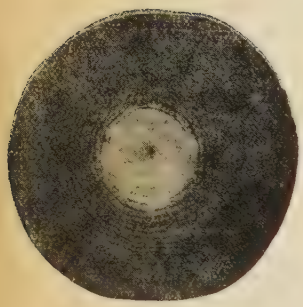


Section of the Chemistry Laboratory
Scientific Control Is Essential

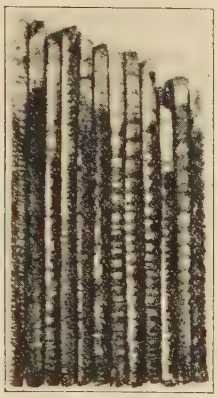
International Creosoted Pine Poles
Characteristics of Quality Pine Poles

Continued

Value of Penetration



Uniform Penetration Is a Criterion of Good Treatment



Deep Penetration Means Long Life For the Poles

While several factors are important, and particularly the grade of preservative is important, no single factor has such bearing on the life and the quality of creosoted pine poles as the depth of creosote penetration and the uniformity of creosote penetration. Untreated wood of any kind commonly used for poles will decay eventually, and the only preventive is to have the penetration of the preservative deep and uniform and of proper grade. This is accomplished only when skilled technicians analyze the creosote and apply the treating process.

Strength

The standard for ultimate fiber stresses for the commonly used pole woods has been developed by the Sectional Committee on Wood Poles under the sponsorship of the Telephone Group, American Standards Association. These ultimate fiber stresses quoted verbatim are tabulated below.

Northern White Cedar	3600 lbs. per sq. in
Western Red Cedar	5600 lbs. per sq. in.
Chestnut	6000 lbs. per sq. in.
Southern Yellow Pine (Creosoted)	7400 lbs. per sq. in.

Fire Resistance

Fires that rage across the dry cane fields of Cuba crack insulators, melt steel, and burn untreated wood to ashes, but creosoted pine poles stand the flames. Such is the actual experience. Along almost every railroad right-of-way fire gangs burn the weeds each fall and it is a matter of common record that while untreated posts burn completely, creosoted pine poles are undamaged. Under these severe conditions the creosoted pine pole may take fire and smolder and smoke for a while, but finally the fire smothers itself out, leaving a practically undamaged pole. The action is analogous to a burning oil lamp wherein the wick though it forms the support for the flame is itself consumed very slowly.

The International Creosoted Pine Pole is a clean pole and is widely used in such service as is here shown.

Appearance and Cleanliness

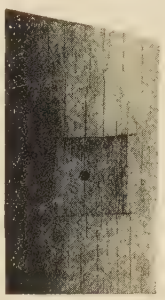
Early in the history of the development of creosoted pine poles some question was raised as to their use on city streets. It was feared that the bleeding of some of the poles might cause trouble if the clothing of pedestrians rubbed against them. No longer are these objections heard either in protest or propaganda. International's care in timber selection, the skill of its production and manufacturing forces, and advances in the science of timber treatment all have contributed to relegate these objections to the background, and to give to the business district and the residential street the security and economy of the creosoted pine pole. Graybar-International poles are in use in the business and residential districts of the largest cities of the United States, and in thousands of the smaller ones. The present-day pole is a clean pole. It is smooth and shapely and stands with the appearance of tapered wrought-iron pipe, rather than that of processed trees.

Termites

Termites are attracting more and more attention because of their attacks on poles. Formerly termites lived in the forests, but as the forests become depleted they seek shelter elsewhere and find their way into untreated structural wood. Untreated pole lines have been accused of acting as termite highways by means of which they could fly from pole to pole and then to residence; infesting new areas. It is a fact that termites have now been found in all but three states of the United States.

Creosoted pine poles are practically immune to termite attack. Even though checks in the wood may form, they do not go deep enough to expose untreated interior wood that would afford shelter for these insects.

Improved Roof



The illustration shows a new type of pole roof that many of the utility companies are standardizing upon. It is a one-way roof, cut at an angle of 15°. It is to be recommended.

The advantages of this roof are:

1. Reduces Checking

A roof cut in this manner leaves a minimum of wood along the center line, the natural cleavage point of the pole. This invites checking. The one-way roof eliminates this disadvantage.

2. Provides Better Drainage

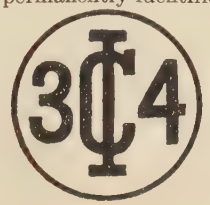
As the roof of a pole weathers, the springwood rings of any species being softer than the summerwood, weather faster, causing the summerwood to stand out in ridges. On the two-way roof these ridges form retaining cups for rain water while on the one-way roof they drain.

3. Conserves the Preservative

Evaporation is a surface phenomenon. There is less surface on a one-way than on a two-way roof.

Marked Poles

Below is the mark by which Graybar-International poles are identified wherever found. This appears as a date-brand on the side ten feet from the butt of the pole; and is supplemented by an identifying brand on the top and the butt of each pole. These marks are conclusive evidence of our confidence in the quality of the product and the desire to be permanently identified with it.



Beware of unmarked poles. If in a few years they begin to fail, the experience is that it is impossible to tie them definitely to the source of supply. On the other hand when a company consistently uses high grade materials and good preservative treatment which result in long-time dependable service, the company willingly and permanently attaches its name to the product.

Union Metal Monotube Poles

Semi-Ornamental Steel Base

Monotube Poles are used for the support of trolley strain wires, distribution and transmission lines, traffic signals or any combination of these. For any use wherever a general service pole is required.

Made of high grade open hearth steel, the structure of which is improved by the steel mill operation and still further by the Union Metal Cold-Rolling process. Will not corrode with a heavy loose scale. If oxidation should occur it will develop a fine, dense powder which tends to retard further corrosion.

Monotube Poles have no horizontal joints. Shafts are one continuous tapered tube, with one electric welded vertical seam. One piece construction insures uniform quality, longer life and better appearance.

Before Monotube Poles are painted they are thoroughly cleaned both inside and out to remove scale and other foreign matter. Cleaning the steel prior to painting allows the paint to bond with the steel, materially lengthening the life of the pole. As an added protection, they are painted inside and out.

Either of two methods of anchorage can be employed. The pole may be embedded directly in the ground or concrete or the Union Metal anchor rod construction can be used. Both types of anchorage have their places and with the engineering features of the installation in mind, the customer will choose the proper type.

Embedded poles can be furnished with or without the heavy steel ground sleeve. Where ground sleeves are required, location of sleeve with reference to pole butt must be specified. The ground sleeve is two feet in length and is made from open hearth steel. With this material embodied in the protective collar, maximum safety against corrosion is obtained.

Anchor rod construction follows the methods used in setting heavy machinery and steel frame work for large buildings or towers. No forms are required for the concrete foundation. Customary practice requires a hole of diameter and depth in accordance with the load to be carried.

For the purpose of ornamentation, four ornamental leaves are attached to the base to conceal the projecting foundation bolts and nuts. Removal of the screw holding the leaf in position gives immediate access to the foundation bolt.

Lighter and smaller types of Monotube Poles are manufactured as well as poles of different strengths and height up to and including 75 feet. Complete information on these poles may be obtained by giving strength and height pole required.

With Ground Collar

Sozol for Wood Preservation

Brush Treatment

Brush treatment of poles consists in applying hot preservative to the ground line surface of a pole with a brush. This method is not in general use among pole dealers, but is used by operating companies for local treatment.

For effective brush treatment the highest boiling point coal tar distillate obtainable is recommended. High boiling creosote oils penetrate more readily and are free from black and sticky tars that do not penetrate but concentrate on the outer wood cells. Graybar Electric Sozol has been developed for this work.

Sozol

Sozol is for brush application for poles and all construction wood. It is a pure high boiling distillate of coal tar, that is, it is a product obtained in a distillation process through the elimination of volatile products of coal tar and this pure coal tar distillate is not adulterated by adding any other substances. It is not a byproduct, that is, the distillation process is primarily for the purpose of securing this particular oil—not for some other distillate of coal tar in which this oil or a modification of it would come off in the distilling process. All creosote wood preserving oils have two faults in a greater or less degree. Either they are so thin and volatile that when applied with a brush or by open tank method, they partially evaporate or leach out and their preservative qualities are thus impaired; or they are adulterated with heavier coal tar oils and these heavier constituents clog up outer cells of the wood and prevent the penetration required for effective treatment.

Sozol is of high specific gravity and greater body and in consequence, is more stable than ordinary pure creosote oils sold for wood preserving. It is not as volatile as these oils; at the same time, it has absolutely no viscous properties which interfere with effective penetration as in the case of mixed oils. In short, it has permanency and so affords the greatest possible continued protection. It is more than a creosote oil, it is a special wood preservative of stability.

Sozol is supplied in drums, barrels and cans.

Rainier Wood Pin Specifications

MATERIAL.—Pins shall be sound, reasonably straight grained, yellow or black locust (or Oak, as called for), free from knots, checks, sap wood, brash-wood, cracks, etc., except as hereinafter specified.

SAP WOOD.—Sap wood is permitted on the shoulder of the pin provided it does not extend into the tenon.

CHECKS.—Season checks not over ⅛ inch deep are permitted provided they do not appear elsewhere than in the shoulder and lower half of the tenon.

KNOTS.—Pins shall be free from loose or unsound knots. Sound knots not exceeding ¼ inch in diameter are permitted on the shoulder and lower half of the tenon.

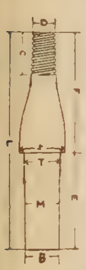
GRAIN.—The grain of the wood shall be reasonably parallel to the axis of the pin. Irregularities in grain which are wholly confined to the section within one inch of the bottom of the tenon shall be permitted.

WORM HOLES.—Worm holes and channels not over ⅛ inch diameter are permitted provided they do not impair the holding power of the thread or the placing of the nail in the pin, and provided that they shall not appear in over 10 per cent of pins in any shipment.

DIMENSIONS.—Pins are usually made from unseasoned wood due to difficulty of securing and manufacturing seasoned timber. Pins after seasoning shall be of the dimensions shown in drawing, or as ordered (with allowable variations as shown).

FLAT SHOULDERS.—One flat surface is permitted, provided the wood is not cut away to the depth of the shoulder at any point of the circumference; in the bottom one-fourth of the tenon irregularities in shape which do not involve the removal of more than one-quarter of the cross-section called for in the drawing are permitted; provided these defects do not occur in more than 10 per cent of the pins furnished.

THREADS.—All pins shall have four threads per inch. The thread shall be smooth and of uniform pitch and shall taper 1/16 inch in diameter to 1 inch in length.



	1¼x8 Pins Inches	1½x9 Pins Inches	Allowable Variation Inches
L—Length Pin	8	9	¼
F—Length Top	4	5	¼
E—Length Tenon	4	4	¼
D—Diameter Thread	63/64	63/64	1/64
C—Length Thread	2½	2½	¼
S—Diameter Shoulder	1½	1¾	1/16
T—Diameter Tenon on Top	1 9/32	1 17/32	1/64
M—Diameter Tenon at Middle	1¼	1½	1/32
B—Diameter Tenon at Bottom	1 3/16	1 7/16	1/16

Standard Pin

Transposition Pin

Standard Pins

Dimensions, Inches M	L	D	Locust Wt., Lbs. per 1000
1¼	8	1	325
1½	9	1	450

Transposition Pins

M	L	D	Wt.
1¼	9	1	400
1½	10	1	500

High Tension Pin

Duplex Pin

High Tension Pins

M	L	D	Wt.
1½	9	1⅜	500
1½	11	1⅜	550
1½	12	1	600
1½	12	1⅜	650
1¾	12	1	1200
1¾	12	1⅜	1300
1¾	10⅛	1	1000
1¾	10⅛	1⅜	1100
1¾	14	1⅜	1400

Duplex Pins

M	L	D	Wt.
1¼	11½	1	500
1¼	12	1	550
1½	12	1	650

Prices upon application.

Rainier Bracket and Pole Step Specifications

MATERIAL.—Sound, reasonably straight grained, Oak, free from knots, checks, sap wood, etc., except as hereinafter specified.

SAP WOOD.—Permitted up to 25 per cent of volume of bracket.

CHECKS.—Season checks not over ⅛ inch deep are permitted provided they do not appear within two inches of the thread.

KNOTS.—Brackets shall be free from loose or unsound knots. Sound knots not exceeding ½ inch in diameter permitted below the shoulder but not in lower 3-inch section of bracket.

GRAIN.—Grain of the wood shall be reasonably parallel to the axis of the bracket.

WORM HOLES.—And channels not over ⅛ inch diameter are permitted provided they do not impair the holding power of the thread, or the nail holes; and provided that they shall not appear in over 10 per cent of the brackets furnished in any shipment.

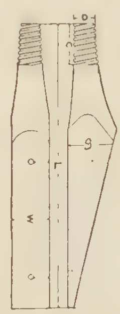
DIMENSIONS.—After seasoning, dimensions with allowable variations shall be as shown; Wane allowed in body of bracket not exceeding ¼ inch; irregularities in body of bracket not to exceed 10 per cent of volume.

THREADS.—All brackets shall have four threads per inch. The thread shall be smooth and of uniform pitch, and shall taper 1/16 inch in diameter to 1 inch in length.

MANUFACTURE.—All workmanship shall be of best commercial grade.

STANDARD PACKAGE.—Nos. 1, 3, 4 and 5, 25 per bundle. Nos. 2 and 6, 20 per bundle.

CREOSOTE OIL DIP TREATMENT.—It is the practice to furnish oak pins and brackets "dipped in red paint," without extra charge. This treatment is of little or no protective value, and we recommend instead a dipping in hot Creosote Oil, at a slight additional charge. Not only does this make a clean bracket, but gives a preservative value and a lasting effect.



		Allowable Variation Inches
L=Length Bracket	As ordered	¼
D=Diameter Thread	63/64	1/64
C=Length Thread	2½	¼
W=Width	As ordered	⅛
S=Height at Shoulder	As ordered	⅛

Brackets

	Dimensions W	S	L	D	Wt. Lbs. per 1000
Standard No. 4	1½	2	10	1	500
Standard No. 1	1½	2	12	1	650
Standard No. 3	1½	2¼	12	1	700
Standard No. 5A.T.&T.	1⅝	2	12	1	650
Standard No. 2	2	2¼	12	1	850
Standard No. 6 W.U.	2	2⅜	12	1	850
Standard No. 7 W.U.	2	2¾	12	1	950

Pole Steps

	W	S	L	D	Wt. Lbs. per 1000
Standard	1½	2	7	..	450
Western Union	1¾	2¾	7	..	650

Rainier Wood Crossarms

The prime requisites in a crossarm are lightness, strength and durability. Some engineers stress one quality and some another, but Rainier Fir is the best answer for all sorts of uses and conditions. However, we are equally able to furnish long leaf yellow pine crossarms, and creosoted arms, in either fir or yellow pine.

Rainier fir crossarms do not require painting or the use of any preservative; are more than double the necessary strength with a large "factor of safety"; they live in actual service for many years.

Treatment of Rainier Arms

In some localities it is occasionally found necessary to color crossarms so as to distinguish them from arms used for other purposes. If a color is necessary the arms should be dipped in the proper stain, which our mills are prepared to do.

We recommend, however, that a Rainier arm be dipped in a hot solution of pure distillate creosote oil, if that will answer the purpose of color. This treatment tends to prevent an arm from checking and to protect it from woodpeckers, and from the inroads of termites, etc. Unless color is demanded, this expense is usually not warranted.

Short-leaf yellow pine (and long-leaf sapwood) crossarms, should be creosoted (pressure treatment) before being put into service; this treatment prolongs the life of the arms for many years, but great care should be exercised that only pure distillate oil is used and the treatment given by a reliable creosoting company.

Arms of Special Size and Manufacture

A good many public utilities require from time to time small lots of arms of special size and manufacture, that is, other than those hereinafter listed as standard. We will be glad at any time to stock any special arm for a customer under a special contract arrangement, and any of our representatives will be glad to go into this matter fully on request. We have also at Chicago, Minneapolis, Kansas City, Mo., Texarkana, Tex., Wilmington, N. C., New Orleans, La., Centralia, Wash., and Newark, N. J., large stocks of blank arms, which can be cut to length and bored according to your special requirements. This is merely another link in the chain of Graybar Electric service on crossarms.

All arms bored for one $\frac{5}{8}$-inch center bolt and $\frac{3}{8}$-inch brace bolts unless otherwise specified, except as shown in "Standard" table.

Minimum Carload Weight

Fir from Pacific Coast Mills, 38,000 pounds. Small cars are scarce and weight of at least 50,000 pounds should be figured on. Cars to contain as high as 90,000 pounds can be had. Smaller cars are available in the Southern Yellow Pine Regions—minimum weight, 34,000 pounds.

All dimensions are subject to the usual manufacturing variations; crossarms long in stock show some shrinkage from original dimensions.

Rainier Crossarm and Conduit Specifications

Rainier Fir Crossarms

Material shall be sound, live, yellow Douglas fir; close-grained (at least eight rings per inch); straight grained (not out of parallel to edge of arm in central section more than five degrees).

Free from rot, dote, loose heart, loose or rotten knots, shakes and splits.

Warp up to $\frac{1}{8}$-inch off-set per lineal foot is allowed; also sound knots up to 1-inch diameter, but not at pin holes or in clusters. Pitch pockets up to 8 inches in length, season checks up to 1 inch in depth, and sap wood up to 25 per cent of volume of arm is also allowed.

Manufacture of best commercial practice. Kiln dried in sizes up to 4x5 inches finished; planed on all four sides; pin holes accurately centered, smooth, and not badly broken out by bits in boring; dimensions as shown, with commercial variations.

Western Standard Grade Fir

This grade covers all crossarms up to 4x5 inches, inclusive, finished size either way.

The arms shall be: reasonably straight grained, well manufactured from sound, live seasoned lumber (green lumber prohibited) 75 per cent heart, by volume; free from rot, dote, loose-heart, loose or unsound knots, shakes, splits boxed heart, warp in excess of $\frac{1}{8}$-inch off-set per foot, sound knots in clusters or larger than $1\frac{1}{4}$ inches in diameter, pitch-pockets more than 8 inches long, season checks more than 1 inch deep and any other defect that seriously impairs strength.

Standard Transmission Grade Fir

For arms larger than 4x5 inches, either way: reasonably straight grained and well manufactured from sound, live lumber, of medium rate of growth, boxed heart excluded.

Free from shakes and wormholes; and sap wood in excess of 30 per cent in volume of arm.

Sound knots admitted, not clustered, up to $1\frac{1}{2}$ inches in diameter, and pitch pockets not over 8 inches long.

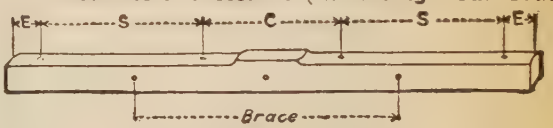
Long Leaf Yellow Pine

Genuine Long-Leaf Yellow Pine, guaranteed every arm at least—⅞ heart in volume, and free from knots (except small, sound knots, not over one inch in diameter), or other defects that would impair the strength of the arm.

Creosoted Crossarms and Conduit

Free from large, unsound or loose knots, or other defects which would impair strength; creosoted steam and vacuum treatment—dead oil of coal tar under pressure—either 12 lbs. per cu. ft. (full cell) or 8 lbs. per cu. ft. (empty cell) as ordered.

How to Describe a Crossarm (In Placing Your Order)



NOTE.—C, S, E —center spacing of pin holes.

STATE— 1 —Quantity wanted.
2—Material and quality (or grade).
3—Treatment (if any).
4—Width, in inches (and fraction).
5—Height, in inches (and fraction).
6—Length, in feet and inches.
7—Number of pin holes.
8—Size of pin holes.
9—Spacing between pin holes (center-side-end).
10—Size center bolt hole.
11—Size brace bolt holes.
12—Space between brace bolt holes.

For example, the Standard N.E.L.A. 6-pin crossarm is described— "Rainier Fir, unpainted, $3\frac{1}{2}$"x$4\frac{1}{2}$"x8', bored for six $1\frac{17}{32}$" pin holes, spaced 30" center, $14\frac{1}{2}$" sides, 4" end, one $1\frac{1}{16}$" center bolt hole, two $\frac{3}{8}$" brace bolt holes 38" apart."

Important

In ordering crossarms, be very careful to specify just what is wanted, and, if other than standard boring, send sketch or blue print with order. Arms specially made are of no use for general stock, and cannot be taken back if mistake is made in ordering.

Orders for special arms are not subject to cancellation.

Rainier Wood Crossarms

Electric Light Arms, 3¼x4¼ In.

Cat. No.	Size and Length	Pin Holes Spacings, In. Center	Sides	Ends	Pin Holes Size In.	Center Bolt Hole In.	Brace In.	Weight Pounds per Arm Fir	Yellow Pine Untreated	Yellow Pine Creosoted 8 Lbs.	12 Lbs.
1	3 ft. 2 pin	28	....	4	1 17/32	5/8	25	10.62	13.2	15.24	15.93
2	4 ft. 4 pin	16	12	4	1 17/32	5/8	28	14.16	17.6	20.32	21.24
3	5 ft. 4 pin	18	17	4	1 17/32	5/8	28	17.7	22	25.40	26.55
4	6 ft. 4 pin	22	21	4	1 17/32	5/8	32	21.24	26.4	30.48	31.82
5	6 ft. 6 pin	16	12	4	1 17/32	5/8	32	21.24	26.4	30.48	31.82
6	8 ft. 6 pin	18	17½	4	1 17/32	5/8	32	28.32	35.2	40.64	42.48
7	8 ft. 8 pin	16	12	4	1 17/32	5/8	32	28.32	35.2	40.64	42.48
8	8½ ft. 10 pin	16	9¾	4	1 17/32	5/8	32	30.09	37.4	43.18	45.14
9	10 ft. 8 pin	17½	15¾	4	1 17/32	5/8	42	35.4	44	50.80	53.10
10	10 ft. 10 pin	16	12	4	1 17/32	5/8	42	35.4	44	50.80	53.10
11	10 ft. 12 pin	16	9⅝	3⅞	1 17/32	5/8	42	35.4	44	50.80	53.10

R. S. A. (Railway Signal Association) Arms, 3x4¼ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
21	6 ft. 4 pin	20	22	4	9/16	11/16	..	19.8	24.6	28.44	29.70
22	8 ft. 6 pin	19	17¼	4	9/16	11/16	..	26.4	32.8	37.92	39.60
23	10 ft. 8 pin	19	15½	4	9/16	11/16	..	33	41	47.40	49.50
24	10 ft. 10 pin	16	12⅜	2½	9/16	11/16	..	33	41	47.40	49.50

Western Union Arms, 3x4¼ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
25	6 ft. 6 pin	20	11½	3	9/16	21/32	..	19.8	24.6	28.44	29.70
26	8 ft. 8 pin	21	11½	3	9/16	21/32	..	26.4	32.8	37.92	39.60
27	10 ft. 10 pin	22	11½	3	9/16	21/32	..	33	41	47.40	49.50

Pony Telephone Arms, 2¾x3¾ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
31	24 in. 2 pin	17	....	3½	1 9/32	5/8	..	5.4	6.5	7.50	7.84
32	30 in. 2 pin	23	....	3½	1 9/32	5/8	..	6.75	8.125	9.38	9.80
33	36 in. 2 pin	29	....	3½	1 9/32	5/8	25	8.1	9.75	11.25	11.76
34	42 in. 4 pin	16	9½	3½	1 9/32	5/8	28	9.45	11.375	13.13	13.72
35	62 in. 6 pin	16	9¾	3½	1 9/32	5/8	28	13.95	16.8	19.38	20.25
36	82 in. 8 pin	16	9¾	3¾	1 9/32	5/8	28	18.45	22.2	25.63	26.79
37	102 in. 10 pin	16	9¾	4	1 9/32	5/8	28	22.95	27.625	31.88	33.72
38	120 in. 12 pin	16	9⅝	3⅞	1 9/32	5/8	28	27	32.5	37.50	39.20

N. E. L. A. Arms, 3½x4½ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
41	3 ft. 2 in. 2 pin	30	....	4	1 17/32	11/16	28	12⅔	15.83	19.00	19.79
42	5 ft. 7 in. 4 pin	30	14½	4	1 17/32	11/16	38	22⅓	27.92	33.50	34.90
43	8 ft. 6 pin	30	14½	4	1 17/32	11/16	38	32	40	48.00	50.00
44	9 ft. 2 in. 8 pin	30	12	4	1 17/32	11/16	38	36⅔	45.83	55.00	57.29

N. E. L. A. (Light) Arms, 3¼x4¼ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
51	3 ft. 2 in. 2 pin	30	....	4	1 17/32	11/16	28	11.2	13.93	16.09	16.82
52	5 ft. 7 in. 4 pin	30	14½	4	1 17/32	11/16	38	19.76	24.57	28.36	29.65
53	8 ft. 6 pin	30	14½	4	1 17/32	11/16	38	28.32	35.2	40.64	42.48
54	9 ft. 2 in. 8 pin	30	12	4	1 17/32	11/16	38	32.45	40⅓	46.57	48.68

New England Arms, 3¼x4¼ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
61	3 ft. 2 pin	30	....	3	1 17/32	11/16	33	10.62	13.2	15.24	15.93
62	5 ft. 6 in. 4 pin	30	13½	4½	1 17/32	11/16	36	19.47	24.2	27.94	29.20
63	7 ft. 9 in. 6 pin	30	13½	4½	1 17/32	11/16	36	27.43	34.1	39.37	41.15
64	10 ft. 8 pin	30	13½	4½	1 17/32	11/16	36	35.4	44	50.80	53.10

New England Power Arms, 3¾x4¾ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
71	3 ft. 2 pin	30	....	3	1 17/32	11/16	33	13.98	17	20.79	21.75
72	5 ft. 6 in. 4 pin	30	13½	4½	1 17/32	11/16	36	25.63	31.17	37.12	39.88
73	7 ft. 9 in. 6 pin	30	13½	4½	1 17/32	11/16	36	36.12	43.92	53.71	56.19
74	10 ft. 8 pin	30	13½	4½	1 17/32	11/16	36	46.6	56.67	69.30	72.50

Pacific Arms, 3¼x4¼ In.

Cat. No.	Size and Length	Center	Sides	Ends	Size In.	Center Bolt Hole In.	Brace In.	Fir	Yellow Pine Untreated	8 Lbs.	12 Lbs.
81	3 ft. 2 pin	28	....	4	1 17/32	5/8	32	10.62	13.2	15.24	15.93
82	5 ft. 4 pin	28	12	4	1 17/32	5/8	32	17.7	22	25.40	26.55
83	7 ft. 6 pin	28	12	4	1 17/32	5/8	32	24.78	30.8	35.56	37.17
84	9 ft. 8 pin	28	12	4	1 17/32	5/8	42	31.86	39.6	45.72	47.79
85	11 ft. 10 pin	28	12	4	1 17/32	5/8	42	38.94	48.4	55.88	58.41

Any change required from standard spacings, pin holes or bolt holes as here given, must be distinctly specified on the order.

Rainier Special Crossarms

Cat. No.	Size Inches	Weight, Pounds per Lineal Foot Fir	Yellow Pine Untreated	Yellow Pine Creosoted 8 Lbs.	12 Lbs.	Cat. No.	Size Inches	Weight, Pounds per Lineal Foot Fir	Yellow Pine Untreated	Yellow Pine Creosoted 8 Lbs.	12 Lbs.
A	2¾x3¾	2.7	3.25	3.75	3.92	J	3¾x4¾	4.66	5.67	6.93	7.25
B	3 x3¾	2.92	3.6	4.16	4.35	K	3¾x5	4.72	5.95	7.35	7.65
C	3 x4	3.11	3.9	4.50	4.70	L	3¾x5¾	6	6.8	8.40	8.72
D	3 x4¼	3.3	4.1	4.74	4.95	M	4 x5	5.2	6.33	7.80	8.14
E	3¼x4¼	3.54	4.4	5.08	5.31	N	4¼x5¼	6.19	7	8.63	9.00
F	3¼x4½	3.74	4.7	5.43	5.67	O	4½x5½	6.83	7.63	9.41	9.82
G	3½x4½	4	5	6	6.25	P	4 x6	6.6	7.52	9.27	9.67
H	3½x4¾	4.2	5.3	6.3	6.62	Q	4¾x5¾	7.5	8.5	10.48	10.92
I	3½x5	4.43	5.57	6.83	7.14	R	5 x6	8.2	9.29	11.21	11.95

Rainier Spacer Blocks

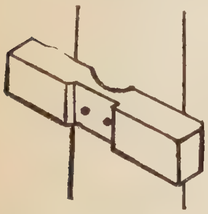
The Rainier Spacer Block insures a more rigid and stronger structure where double-arming is necessary.

Has a bearing surface of its entire cross-section as compared with the width of washer used in other methods.

Stops the use of make-shifts, and the insertion of part-life material in a full-life structure.

Only two bolts to tighten, not four.

In two sizes to accommodate large or small pole tops—3¼x4¼x10 inches and 3¼x4¼x16 inches.



Rainier Kicker Arms

Stops sawing up new crossarms.

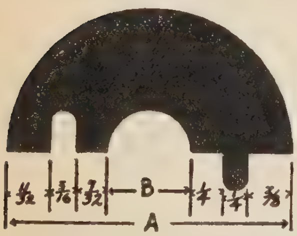
No gains to cut; no holes to bore in the pole. Just drive two lag screws to install.

Distance between front and back of bracket, 3¼ inches.

Size, 3¼x4¼x15 inches.

Weight, 3.6 pounds each.

Rainier Reversible Tree Moulding



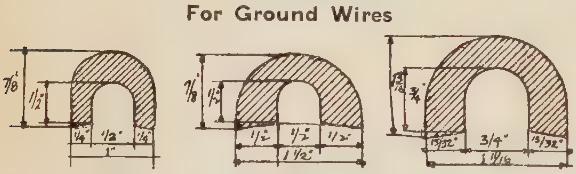
Rainier Reversible Tree Moulding is made from kiln dried fir and then impregnated in high pressure retorts with a moisture resisting preservative.

Comes in 2 to 10-foot lengths.

No.	Dimensions, Inches A	Dimensions, Inches B	No.	Dimensions, Inches A	Dimensions, Inches B
1	2	¼	5	2 5/16	9/16
2	2 1/16	5/16	6	2½	¾
3	2⅛	⅜	7	2¾	1
4	2¼	½	.	...	...

Rainier Fir Moulding

For Ground Wires



No. 1 No. 2 No. 3

Furnished unpainted, painted green, or dipped in hot creosote oil as ordered. Furnished without fittings.

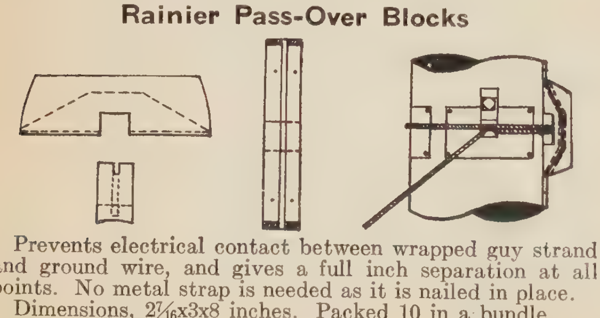
In 8-foot lengths; 200 feet to a bundle.

No. 1, weight per 1000 feet, 120 pounds.

No. 2, weight per 1000 feet, 180 pounds.

No. 3, weight per 1000 feet, 310 pounds.

Rainier Pass-Over Blocks



Prevents electrical contact between wrapped guy strand and ground wire, and gives a full inch separation at all points. No metal strap is needed as it is nailed in place.

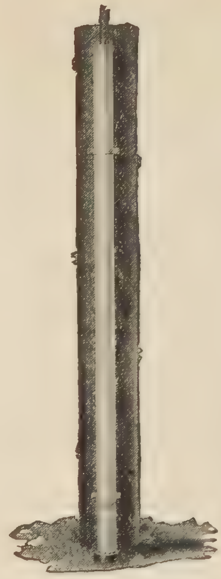
Dimensions, 2 7/16x3x8 inches. Packed 10 in a bundle.

Shipping weight per 100, 100 pounds.

Prices Upon Application

Hubbard U-Cable Guards and Straps

Hot Galvanized



When telephone or power cables enter the ground at the base of a pole or side of a building they should be protected by U-cable guards.

The U-cable guards are made from No. 14 gauge sheet steel and are formed into a U shape. This shape provides the additional strength necessary against collision and the rounded surface protects the pedestrian.

The straps are made from flat steel and are shaped to fit the U-cable guards.

U-Cable Guards

Cat. No.	Lgth. Ft.	Diam. In.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
7531	6	1⅛	5	450	$66.60
7532	5	2 3/16	5	750	105.80
7533	8	2 3/16	5	1225	169.20
7534	5	3 3/16	5	1360	154.20
7535	8	3 3/16	5	1750	246.30

Mounting Straps

Cat. No.	Size Steel Inches	Used with Cable Guards No.	Diam. Holes Inches	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
7538	⅛x ¾	7531	9/32	100	13	$5.90
7439	⅛x ¾	7532–3	9/32	150	21	8.60
7540	3/16x1	7534–5	11/32	100	55	18.00

Hubbard Conduit Straps

Hot Galvanized

No. 8925 No. 89?7

For attaching standard 2 or 3-inch vertical conduit to wood poles. Nos. 8925 and 8926 are made of 1x¼-inch steel and have holes for ⅜-inch lag screws. Nos. 8927 and 8928 are made of 1¼x¼-inch steel with 9/16-inch holes.

Cat. No.	Width Inside In.	Nominal Size Conduit, In.	Type	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
8925	2½	2	Single	10	78	$13.70
8926	3½	3	Single	100	100	17.90
8927	4¾	2	Double	10	106	18.70
8928	7	3	Double	10	150	26.70

Hubbard Copperweld Staples

The larger size staples are used for attaching ground wire moulding to pole and the smaller size for attaching insulated or bare grounding wires to the pole.

*To be used with standard N.E.L.A. 1-inch moulding. †Price per 100 pounds.

Rolled Point Staples

Cat. No.	Per 100	Ht. In.	Width Inside In.	Thick Wire In.	Std. Pkg.	Ship. Wt., Lbs. per 100
7493	$ .70	1¼	¼	.114	500	1
7494	.85	1½	5/16	.144	500	1½
7495	.95	1¾	⅜	.144	500	2
7496	1.15	2	½	.162	500	2¼
*7521	1.55	2	1 1/16	3/16	100	4
*7522	3.10	3	1 1/16	¼	100	8

Cut Point (Fence) Staples

Cat. No.	Per 100	Ht. In.	Width Inside In.	Thick Wire In.	Std. Pkg.	Ship. Wt., Lbs. per 100
7651	†$25.00	1⅜	½	.162	6400	1¾
7652	† 25.00	1½	⅜	.162	5600	2
7653	† 25.00	2	¼	.162	4600	2¼
7654	† 25.00	1¼	3/16	.114	12400	¾

Spaulding Universal Tree Wire Guards

Guard Ready to Wrap Around Wire

Guard Installed on Wire

These guards are made of 2 materials. For the inside of the tube a flexible bakelized fabric is provided, of high dielectric strength, affording perfect electrical protection. This is an inert material which will not oxidize nor deteriorate after long-time exposure.

Several turns of the flexible insulating material enclose the wire. Overlying this inner protection is a tough outside shell of glass-hard finish. This shell is built up of strong, tough fabric, bonded with phenolic varnish for density and resistance to abrasion. Will not abrade or wear through.

Economical in that it is not necessary to cover the wire from one pole to another in order to protect a section of it. Also has the constant gripping action which maintains the tightness of the convolutions and prevents any longitudinal displacement.

For Insulation and Abrasion

For 2600 Volts

Type	Per 100	Size Wire	Dimensions, Inches Outside Flex. Shell	Sec.	Lgth.
A	$70.00	No. 6 to No. 2 W. P. 3-Brd. No. 1 to No. 00 Str. Bare .30 to .40-Inch Diam.	4½	6	38
For 5000 Volts					
B	83.00	No. 6 to No. 2 W. P. 3-Brd. No. 1 to No. 00 Str. Bare .30 to .40-inch Diam.	5	12	38
C	76.00	No. 8 W.P. 3-Brd. No. 8 to No. 2 Sol. Bare .16 to .26-Inch Diam.	4	9	38
D	96.00	No. 1 to No. 0 W. P. 3-Brd. No. 000 to No. 250,000 cir. mil. Str. Bare .50 to .66-Inch Diam.	7	17	38
E	110.00	No. 00 to No. 0000 W.P. 3-Brd. No. 250,000 to No. 500,000 cir. mil. Str. Bare .66 to .80-Inch Diam.	9	22	38
For 7500 Volts					
K	110.00	No. 8 to No. 2 W. B. 3-Brd. No. 8 to No. 00 Sol. Bare .13 to .42-Inch Diam.	7	22	38

For Abrasion Only

Provides approximately 2 wraps around the wire. Furnished in 1½, 2 and 10-foot lengths.

	Length, Feet			Approx. I.D.
Type	1½ Per 100	2 Per 100	10 Per 100	Inches
Tm	$17.00	$20.00	$90.00	5/16
Tn	20.00	24.00	99.00	½
Tp	23.00	28.00	130.00	5/8
Tr	26.00	32.00	150.00	¾
Ts	29.00	36.00	170.00	1

In ordering, specify type and length required.

Intermediate length guards will be charged at the price for the next higher standard lengths.

Accessories

Double faced adhesive tape is furnished with each order of tree wire guards to secure guard to wire for easiest installation. A set of installation directions is wrapped with each guard.

Fibre Installation Tool

A special tool of insulating fibre for installation of Spaulding Tree Wire Guards (Types A to K inclusive). The installation of these guards should not be attempted without the use of this tool.

With the use of this tool, these guards can be completely installed in 5 minutes or less, even in extremely cold weather.

Each..... $.60

For installing abrasion guards in 10-foot lengths, a special tool is made for opening the guard and applying it to the wire.

Hubbard Guy Wire Protectors

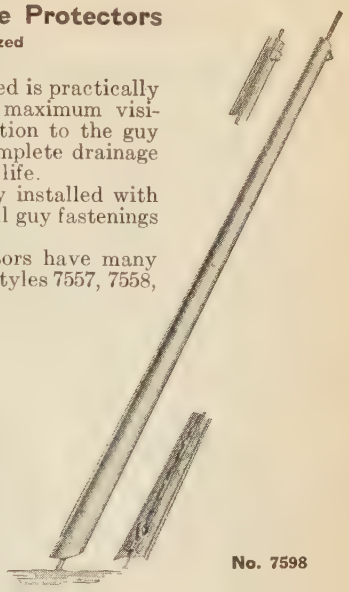
Hot Galvanized

The protector illustrated is practically full-round and provides maximum visibility, safety and protection to the guy wire and the public. Complete drainage and ventilation give long life.

Simply and permanently installed with 2 bolts. Easy access to all guy fastenings at all times.

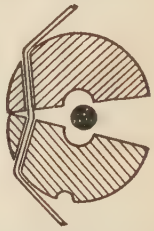
Nos. 7597–7598 protectors have many advantages over former styles 7557, 7558, 7559, included in the listing and which can still be furnished.

Cat. No.	Per 100	Lgth. Ft.	Ship. Wt. Lbs. per 100
7557	$120.00	7	1100
7558	135.00	8	1250
7559	135.00	8	1360
7597	120.00	7	1000
7598	135.00	8	1100

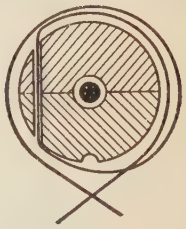


No. 7598

Rainier Jiffy Guy Wire Guards



Lineman Opens Guard and Slips It Over the Guy Strand. Fastening Wires Act as Hinges



Correct Method to Wrap Fastening Wires. The Twist Will Be at the Safety Groove

These guards assembled are hollow wooden cylinders, reinforced mechanically by the strand itself. The built-up construction adds to natural resilience of the wood. Held firm and compact by double wrapped, copperweld tie wires.

Made from clear, straight grained Douglas Fir.

Covered with aluminum paint which catches the eye and makes them highly visible at night.

Hollow wooden cylinder forms a chimney around the strand. At practically all times there is a natural draft of air which will dry both the strand and the inner wall of the guard.

These guards insulate the strand. There is no metallic contact even with the tie wires. This is of importance where line accidents cross the strand with conductor.

Guards can be included in carloads with crossarms; tie wires will not be affixed but will be sent parcel post.

Packed in standard bundles of 6.

7-Foot Length, Weight, 6½ Pounds.....each .....
8-Foot Length, Weight, 7½ Pounds.....each .....

Hubbard Copperweld Ground Rods

Briefly, the advantages derived from the use of Copperweld Ground Rods are:

Smaller diameter, less earth displaced, easier to drive—a 4-pound hammer, with light blows, will drive the rod.

Long life, protection from rusting, welded copper.

Little time and field labor are required for installing Copperweld Rods and attaching the grounding wire.

These ground rods are listed as standard by the Underwriter's Laboratories.

Cat. No.	Per 100	Diameter Inches	Length Feet	Ship. Wt., Lbs. per 100	Cat. No.	Per 100	Diameter Inches	Length Feet	Ship. Wt., Lbs. per 100
*9415	$34.62	3/8	5	200	*9446	$191.94	3/4	6	930
*9416	42.03	3/8	6	240	*9447	222.73	3/4	7	1085
*9425	77.34	1/2	5	340	†9448	252.32	3/4	8	1240
*9426	90.89	1/2	6	410	†9449	283.11	3/4	9	1395
*9427	104.45	1/2	7	480	†9450	312.71	3/4	10	1550
*9428	118.01	1/2	8	550	†9452	374.29	3/4	12	1860
*9429	131.54	1/2	9	615	†9455	465.97	3/4	15	2425
*9430	145.09	1/2	10	685	†9460	617.01	3/4	20	3100
*9435	115.53	5/8	5	535	†9466	333.62	1	6	1650
*9436	136.47	5/8	6	640	†9467	387.82	1	7	1925
*9437	157.43	5/8	7	750	†9468	442.02	1	8	2200
*9438	178.36	5/8	8	855	†9469	496.22	1	9	2475
*9439	199.30	5/8	9	960	†9470	550.43	1	10	2750
*9440	220.26	5/8	10	1070	†9472	658.83	1	12	3300
†9442	262.73	5/8	12	1280	†9474	820.26	1	15	4130
†9444	326.19	5/8	15	1605	†9479	1091.25	1	20	5500
*9445	161.15	3/4	5	775	.....	.....	...	..	....

Standard package: *10; †5.

Hubbard Mechanical Ground Rod Clamps

For attaching either solid or stranded grounding wires to ground rods, galvanized pipe, or sub-station switching arms. The clamps are made of high grade, corrosion-resisting, non-ferrous metal.

Five wrenches furnished with each 100 clamps; No. 9496, one wrench with each 5 clamps.

Cat. No.	Per 100	Size Rod Inches	Size of Wire	Ship. Wt., Lbs. per 100
†9490	$23.13	3/8	4–17 B&S Solid	25
†9491	28.95	1/2	4–14 B&S Solid	30
†9492	42.88	5/8	3/8" Strand to	55
†9493	55.38	3/4	8 B&S Solid	75
†9495	62.56	1	4/0 Strand to	90
‡9496	100.61	*1 1/4	4 B&S Solid	120

*I.D. pipe.
Standard package: †100; ‡50.

Hubbard Ground Rod Moulds

Hubbard Ground Rod Moulds are used for making cast solder connections on ground rods. Both solid and stranded grounding wires can be attached to the ground rod by this method.

The moulds are drawn from sheet brass and are tinned for easy soldering. The collar fits snugly to the ground rod and prevents solder leakage.

Cat. No.	Per 100	Diameter, Inches: Ground Rod	Diameter, Inches: Top of Mould	Std. Pkg.	Wt., Lbs. per 100
9480	$5.80	3/8	15/16	25	2.75
9481	6.00	1/2	1 1/16	25	3.00
9482	6.25	5/8	1 3/16	25	3.25
9483	6.45	3/4	1 5/16	25	3.50
9485	6.65	1	1 9/16	25	3.75

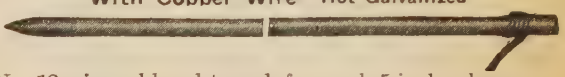
Hubbard Ground Rods

Without Copper Wire—Hot Galvanized

Made of stiff, high carbon open hearth steel, with long sharp points. Unwired rods are provided with holes through the upper ends for attaching grounding wires. These holes are located one inch from end of rods.

Cat. No.	Diam. Inches	Length Feet	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9555	3/8	5	25	185	$30.73
9556	3/8	6	25	223	35.70
9565	1/2	5	25	300	48.18
9566	1/2	6	20	360	56.45
9567	1/2	7	20	420	64.72
9576	5/8	6	10	600	82.90
9577	5/8	7	10	700	95.44
9578	5/8	8	10	800	107.98
9598	1	8	3	2133	275.00

With Copper Wire—Hot Galvanized



No. 12 wire soldered to rod; free end, 5 inches long.

Cat. No.	Diam. Inches	Length Feet	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9505	1/2	5	25	332	$64.28
9506	1/2	6	20	380	72.52
9516	5/8	6	10	600	101.20
9538	1	8	3	2200	314.85

Hubbard Anchor Rods

Hot Galvanized

The eyes are drop-forged. Rods, 3/4-inch diameter and under, have 3 1/2 inches of rolled threads. The 1 and 1 1/4-inch rods have 3 1/2 inches of cut threads. Rods with two eyes furnished if desired for special construction. All prices include square nut, but no washers.

Cat. No.	Diameter Inches	Length Feet	Size Eye, Inches: Width	Size Eye, Inches: Length	Std. Pkg.	Wt., Lbs. per 100	Price per 100
7405	1/2	5	3/4	1	20	320	$64.15
7406	1/2	6	3/4	1	10	375	72.03
7407	1/2	7	3/4	1	10	480	80.08
7415	5/8	5	1 1/2	2	10	540	89.55
7416	5/8	6	1 1/2	2	10	650	101.30
7417	5/8	7	1 1/2	2	10	740	113.99
7418	5/8	8	1 1/2	2	10	850	125.83
7426	3/4	6	1 1/2	2	10	910	134.05
7427	3/4	7	1 1/2	2	5	1060	150.65
7428	3/4	8	1 1/2	2	5	1220	169.15
7429	3/4	9	1 1/2	2	5	1360	185.72
7430	3/4	10	1 1/2	2	5	1520	205.98
7438	1	8	1 1/2	2	3	2270	302.95
7440	1	10	1 1/2	2	3	2730	364.70
7442	1	12	1 1/2	2	3	3200	444.50
7444	1 1/4	10	1 3/4	2 1/4	2	4500	594.50

Hubbard Guyeye Anchor Rods

Hot Galvanized

Eliminates the guy thimble. Combines drop forged oval eye and guy thimble; should be used only with guy strand.

Cat. No.	Diam. In.	Lgth. Ft.	Eye In.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
8406	1/2	6	1/2x 3/4	10	450	$79.61
8407	1/2	7	1/2x 3/4	10	500	92.31
8416	5/8	6	1/2x 3/4	10	680	111.05
8418	5/8	8	1/2x 3/4	10	830	135.58
8426	3/4	6	5/8x 7/8	10	960	143.80
8428	3/4	8	5/8x 7/8	5	1245	178.90
8429	3/4	9	5/8x 7/8	5	1350	201.62
8438	1	8	5/8x1 1/8	3	2300	316.70
8440	1	10	5/8x1 1/8	3	2600	378.45

Tu-Guyeye Anchor Rods

For tying two wires at the same point.

8529	3/4	9	7/8x 3/4	5	1460	$221.50
8538	1	8	1x 3/4	3	2310	346.35
8540	1	10	1x 3/4	3	2895	408.10

Hubbard Wall Straps

Hot Galvanized

Loop Type

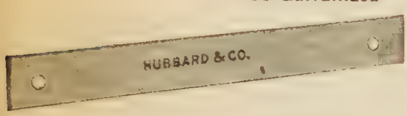
Used by telephone, electric railway companies, and central stations for attaching guys to buildings, dead-ending messengers or span wires on buildings or walls.

Guyeye Type

Cat. No.	Type	Dimensions, Inches: Length over All	Width	Thickness	Diam. Holes	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
8892	Loop	8	1¼	¼	9/16	150	95	$33.30
8895	Guyeye	16⅞	1½	¼	9/16	25	240	50.00
8896	Guyeye	24⅜	1½	¼	9/16	25	328	66.60

Hubbard Guy Shims

Hot Galvanized



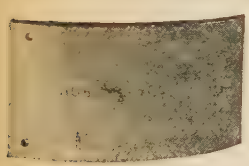
Keeps guy wire strand from cutting into pole.

Six or more are required per pole.

Cat. No.	Per 100	Dimensions Inches	Std. Pkg.	Wt., Lbs. per 100
7570	$9.50	1 7/32x7/32x8	500	53

No. 7575 Hubbard Strain Plates

Hot Galvanized



Serves the same purpose as the guy shim but gives better protection and is cheaper to install. From 2 to 4 are required per pole.

Cat. No.	Per 100	Dimen. In.	Std. Pkg.	Wt. Lbs. per 100
7575	$17.10	4x8x14-Ga.	250	84

Hubbard Guy Hooks

Hot Galvanized

No. 7585

No. 7584

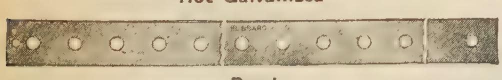
No. 7586

The No. 7584 guy hook is the N. E. L. A. and A. T. & T. Company's standard and is in general use, although the 2-bolt type is preferred by some construction men. For lighter work, the 3½-inch hook gives satisfactory results. Made of half oval steel, bent with the flat side to the pole, except No. 7583½ which is formed from flat steel.

Cat. No.	Size Steel Inches	Length Inches	Diameter Holes, In.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
7583½	1¼x¼	3¼	9/16	450	40	$8.27
7584	1¾x⅜	4	11/16	200	89	17.81
7585	1½x⅜	3½	9/16	300	60	12.59
7586	1½x⅜	6	9/16	175	89	17.81

Hubbard Pole Reinforcing Material

Hot Galvanized



Band

The Hubbard Reinforcement Band makes a strong and reliable method for attaching a stub when the butt of a pole is rotted. This arrangement saves the expense of installing a new pole and provides a reinforcement which adds years of life to the pole.

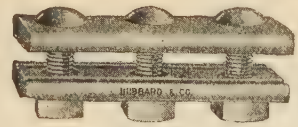
Bolts and lag screws to complete this construction should be ordered separately.

Pipe

Cat. No.	Per 100	Description	Size	Std. Pkg.	Wt., Lbs. per 100
7850	$44.70	Reinforcement Band	12-Ga.x2″x68½″	10	410
7851	56.70	Reinforcement Band	12-Ga.x2″x89½″	10	525
7852	36.20	Reinforcement Pipe	2″ Ex. Hvy.x5″	10	220
7855	80.40	Reinforcement Band	10-Ga.x2″x 99″	10	780
7856	96.20	Reinforcement Band	10-Ga.x2″x120″	10	1010

Hubbard Guy Clamps

Hot Galvanized



No. 7461

Nos. 7447, 7448, 7449 and 7450 for strands 3/16 to ⅜ inch; made of hot rolled steel sections 1 9/16 inches wide by ⅜ inch thick; ½ inch bolts.

No. 7450, W. U. Std.

Nos. 7461, 7462 and 7464, heavier types, for strands 5/16 to 7/16 inch, clamp section 1 21/32 inches wide by ⅜ inch thick, have ⅝ inch bolts. No. 7461 is A. T. & T. Co. standard.

No. 7460 for strands ⅜ to ⅝ inch; is a drop-forged steel section 2⅛ inches wide by ½ inch thick; with ⅝ inch bolts. Clamp sections are so punched that all bolts are reversible in assembly.

Cat. No.	Per 100	No. Bolts	Type	Size Strand Inches	Std. Pkg.	Wt.Lbs. per 100
7447	$21.00	1	Light	3/16 to ⅜	400	63
7448	26.37	2	Light	3/16 to ⅜	175	122
7449	37.40	3	Light	3/16 to ⅜	125	155
7450	45.20	3	Light	3/16 to ⅜	75	226
7461	55.48	3	Heavy	5/16 to 7/16	50	274
7462	37.00	2	Heavy	5/16 to 7/16	100	174
7464	73.79	4	Heavy	5/16 to 7/16	50	365
7460	108.50	3	Extra Heavy	⅜ to ⅝	60	365

Hubbard Drop-Forged Wire Rope Clips

Hot Galvanized

Designed so that the lay of the strand fits the body of the clip perfectly.

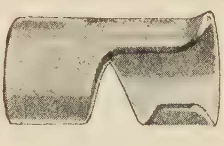
Drop-forged from best quality open hearth steel. With hot galvanized U-bolts and nuts. Legs of U-bolts are so spaced as to give greatest allowable clearance when tightening the nuts with a wrench.

Cat. No.	Per 100	Size Strand Inches	Wt.Lbs. per 100
7480	$35.00	¼	30
7481	35.00	5/16	30
7482	40.00	⅜	34
7483	45.00	7/16	70
7484	45.00	½	70
7485	55.00	⅝	100
7486	65.00	¾	150
7487	75.00	⅞	245
7488	85.00	1	260

Hubbard ServiSleevs

For Guy Strand

Hot Galvanized

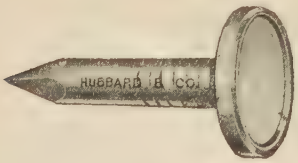


For effectively and uniformly serving strand.

ServiSleevs overcome objections of cutting, clipping and crimping and prevent finger pinching. Easily and quickly installed, retain original shape and maintain rigid grip at all times. Just slips on and stays put. No special tools are needed.

Cat. No.	Per 100	Size Strand Inches	Length Inches	Std. Pkg.	Ship. Wt., Lbs. per 100
7451	$4.50	3/16	1¼	100	2
7452	4.50	¼	1¼	100	3
7453	4.50	5/16	1½	100	5
7454	5.30	⅜	2	100	7
7455	5.30	7/16	2¼	100	10
7456	7.50	½	2¼	100	13

Hubbard Pole Markers
Solid Copper and Aluminum Alloy



Stamped with raised letters or numerals as ordered. Consecutive numerals are depressed. Nominal die charge for quantities less than 1000 pieces, unless standard dies are used, and in all cases of special dies.

Cat. No.	Per 100	Material	Over All* Lgth. In.	Head In.	Shank In.	Std. Pkg.	Ship. Wt. Lbs. per 100
2000	$10.40	Copper	2	1	5/16	1000	7
6000	8.30	Alum. Alloy	2	1	5/16	1000	3.2

Hubbard Pole Dating Nails
Hot Galvanized

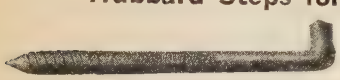
Used for indicating the year in which poles were set and also the height of poles. Special nails with 2 or 3 numerals, letter or characters, depressed in the head can be furnished. Overall length, 2½ inches.

Standard package, 100. Weight per 100, 4.4 pounds.

Cat. No.	1900	1920	1921	1922	1923	1924	1925	1926
No.	Blank	20	21	22	23	24	25	26
Cat No.	1927	1928	1929	1930	1935	1940	1945	1955
No.	27	28	29	30	35	40	45	55

Price..per 100 $1.80

Hubbard Steps for Wood Poles

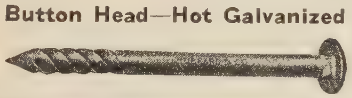


Hot Galvanized

*Long hook head.

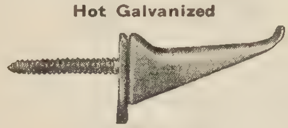
Cat. No.	Dimensions, Inches Diameter	Length	Std. Pkg.	Wt., Lbs. per 100	Price per 100
7123	9/16	9	300	70	$13.81
7125	5/8	10	250	96	16.49
*7126	5/8	10	175	115	24.15

Hubbard Pole Steps for Wood Poles
Button Head—Hot Galvanized



Cat. No.	Dimensions, Inches Diameter	Length	Std. Pkg.	Wt., Lbs. per 100	Price per 100
7129	5/8	9 11/16	175	105	18.69

Hubbard Detachable Pole Steps
Hot Galvanized



Lag Screw Type

Lag screw type is installed by slipping the plate over the lag and screwing lag in pole until plate bites into wood.

Step slides down in a groove on each side of head of lag. When step is removed nothing but the head of the lag extends from pole. Prevents mischievous ascents of pole and accidents.

Cat. No.	Per 100	Description	Ext. from Pole, In.	Std. Pkg.	Wt., Lbs. Per 100
7235	$12.50	Lag and Plate....	...	225	65
7236	26.70	Step............	5 1/8	400	50

Hubbard Drop Forged Guyeye Nuts
Hot Galvanized

Used extensively on the threaded end of machine bolts passed vertically through the cross arm for attaching suspension type insulators. Also useful for dead ending lines. By their use an eye may be added to either end of a double arming bolt or a second eye to an eye bolt.

The guyeye nut is designed exclusively for use with guy strand and eliminates the guy thimble. It is well rounded with a generous radius, so that the strand will not be sharply kinked.

Cat. No.	Diam. Bolt Inches	Inside Dimensions Eye, Inches Width	Length	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
7510	5/8	7/8	1 1/2	200	112	$50.00
7511	3/4	7/8	1 1/2	200	111	50.00
7512	1	1 1/4	1 11/16	100	167	58.30

Hubbard Drop-Forged Eye Nuts
Hot Galvanized

No. 7502

Drop-forged eye nuts were designed for use on the threaded ends of machine bolts passed vertically through cross arms for attaching suspension type insulators. They are also useful for dead ending lines. By their use a second eye may be added to the eye bolts, which permits the attachment of a back guy to the same bolt that supports the insulators to dead ended wire.

Cat. No.	Diam. Bolt Inches	Eye Dimensions, In. Width	Length	Std. Pkg.	Wt., Lbs. per 100	Price per 100
7500	1/2	1 1/8	1 1/8	400	53	$31.40
7501	5/8	1 1/8	1 1/8	400	46	31.40
7502	5/8	1 1/2	1 11/16	300	61	41.40
7503	3/4	1 1/2	1 11/16	300	59	41.40

Hubbard Drop Forged Bolt Eyes
Hot Galvanized

No. 7514

Used on either head or nut end of a machine bolt. Standard bolt eye may be used for attaching suspension insulators with clevis type cap to cross arm. Long type is for supporting suspension insulators with hook in cap of upper unit.

Nos. 7515 to 7518

Cat. No.	Diam. Bolt In.	Inside Dimen. Eye, In. Width	Length	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
*7514	5/8	1 1/8	1 21/32	300	77	$33.30
7515	5/8	1 3/8	3 9/32	150	114	38.40
7516	3/4	1 3/8	3 9/32	150	112	38.40
7517	5/8	1 5/16	2 13/32	125	90	35.00
7518	3/4	1 5/16	2 13/32	125	87	35.00

*Has standard eye. All others have long eye.

Hubbard Stubbing and Guying Washers
Hot Galvanized

Used effectively in stubbing old poles, both serving to draw together the wires wrapped around the pole and stub or at both ends of the stubbing bolt to draw together the pole and stub.

Cat. No.	Per 100	Washer Size Inches	Bolt Size Inches	Hole Size Inches	Ship. Wt. Lbs. per 100
7822	....	2 1/2x2 1/2x3/16	5/8	3/4	31
7823	....	3 x3 x1/4	3/4	7/8	65
7824	....	3 x3 x5/16	1	1 1/8	80
7825	....	3 1/4x3 1/8x1/4	5/8	3/4	75

Peirce Presteel Pole Gains

Hot Galvanized

For attaching cross arms to poles without the need for gaining the pole. The design provides a saddle for the cross arm, a springy saddle for the pole and four points for holding the gain in a fixed position.

Its construction allows for easy installation and ready adjustment for alignment of the cross arm. It spaces the cross arm away from the pole so drainage and ventilation overcome decay.

Cat. No.	Size Arm Inches	Diam. Hole Inches	Size Steel Gauge	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
5091	3¼x4¼	13/16	9	25	268	**$48.30**
5092	3½x4½	13/16	9	25	256	**48.30**
5093	3¾x4¾	13/16	9	10	285	**48.30**
5094	4 x5	13/16	9	10	285	**48.30**

Peirce Cross Arm Reinforcing Plates

Hot Galvanized

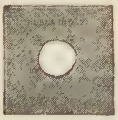
Designed to give greater effectiveness than the standard square washer and provide a means for preventing checking and splitting of the cross arm at the point of attachment to the pole.

Made from flat steel 3⅞ inches wide. A 1 7/16-inch rib is pressed vertically on the plate to give greater strength.

Cat. No.	Size Arm Inches	Diam. Hole Inches	Size Steel Gauge	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
5042	3¼x4¼	13/16	7	100	117	**$19.60**
5043	3½x4½	13/16	7	100	119	**19.80**
5044	3¾x4¾	13/16	7	100	121	**20.20**
5045	4 x5	13/16	7	100	130	**21.30**
5047	6 x8	13/16	7	100	178	**29.70**

Hubbard Square Washers

Hot Galvanized

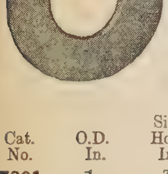


Washers are cleanly cut and are galvanized in such a manner as to insure a heavy, even coat of pure zinc with no large drops to interfere with the fit of the bolt or nut.

Cat. No.	Dimensions Inches	Diam. of Hole, In.	For Bolt Size, In.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
7812	2 x2 x⅛	11/16	½ or ⅝	1500	14.0	**$2.42**
7814	2¼x2¼x3/16	13/16	⅝ or ¾	1000	22.7	**3.54**
7816	3 x3 x3/16	13/16	⅝ or ¾	500	45.8	**7.42**
7817	3 x3 x¼	13/16	⅝ or ¾	350	62.3	**9.10**
7818	4 x4 x3/16	13/16	⅝ or ¾	250	87.5	**12.58**
7819	4 x4 x¼	15/16	¾ or ⅞	200	115.0	**16.13**
7820	4 x4 x½	1 3/16	1	100	220.0	**32.62**
7826	3½x3½x⅜	15/16	¾ or ⅞	200	124.	**21.50**
7827	6 x6 x⅜	1 3/16	1	50	370.	**57.00**

Hubbard Round Washers

Hot Galvanized

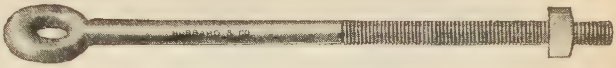


Washers are cleanly cut and are galvanized in such a manner as to insure a heavy, even coat of pure zinc with no large drops to interfere with the fit of the bolt or nut.

Cat. No.	O.D. In.	Size Hole In.	Thickness Inches	For Bolt Size Inches Mach.	For Bolt Size Inches Carriage	Weight Pounds per 100	Std. Pkg.	Price per 100
7801	1	7/16	5/64	⅜	..	1.6	15000	**$.60**
7802	1¼	½	5/64	..	⅜	2.6	7000	**.81**
7803	1⅜	9/16	7/64	½	⅜	4.2	5000	**1.08**
7805	1¾	11/16	⅛	⅝	½	8.4	2500	**1.83**
7806	2	13/16	⅛	¾	⅝	11.0	2000	**2.52**

Hubbard Guyeye Bolts

Hot Galvanized



⅝-Inch—½x¾-Inch Oblong Eye

Cat. No.	Lgth. In.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100	Cat. No.	Lgth. In.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
9060	10	50	140	**$44.88**	**9065**	15	50	190	**$49.73**
9062	12	50	160	**46.65**	**9068**	18	50	220	**52.13**

¾-Inch—⅝x⅞-Inch Eye

Cat. No.	Lgth. In.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100	Cat. No.	Lgth. In.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
9080	10	50	210	**$61.45**	**9085**	15	25	300	**$69.35**
9082	12	50	240	**64.30**	**9088**	18	25	340	**72.65**

Hubbard Machine and Crossarm Bolts

Hot Galvanized

Hubbard Machine and Through Bolts, unless otherwise specified, are furnished with rolled threads which insure a perfect nut fit the full length of the thread.

Cat. No.	Length Inches	Length Thread Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
		⅜-Inch Machine Bolts			
9603	3	3	1500	12.6	**$3.71**
9603½	3½	3	1250	14.3	**4.04**
9604	4	3	1000	15.7	**4.37**
9604½	4½	3	900	17.2	**4.66**
9605	5	3	800	18.3	**5.27**
9605½	5½	3	750	19.8	**5.56**
9606	6	3	650	21.4	**5.89**
		½-Inch Machine Bolts			
9704½	4½	3	550	31.3	**$7.93**
9704¾	4¾	3	500	33.0	**8.36**
9705	5	3	500	37.8	**8.36**
9706	6	3	400	41.0	**9.22**
9707	7	3	400	47.2	**10.08**
9708	8	4	350	55.1	**10.93**
9710	10	4	150	69.3	**12.63**
9712	12	6	150	78.0	**14.83**
9714	14	6	150	83.3	**16.53**
9716	16	6	150	96.6	**18.25**
9718	18	6	100	110.0	**19.95**
9720	20	6	100	121.0	**21.65**
		⅝-Inch Crossarm Bolts			
9808	8	4	100	91	**$15.10**
9810	10	4	100	103	**17.10**
9812	12	6	100	115	**19.10**
9814	14	6	100	129	**21.10**
9816	16	6	100	143	**23.10**
9818	18	6	50	164	**25.10**
9820	20	6	50	178	**27.10**
9822	22	6	50	192	**29.10**
9824	24	6	50	206	**31.10**
9826	26	6	50	220	**33.10**
9828	28	6	50	234	**35.10**
		¾-Inch Machine Bolts			
9908	8	4	50	150	**$23.83**
9910	10	4	50	166	**24.75**
9912	12	6	50	182	**27.68**
9914	14	6	50	202	**30.60**
9916	16	6	50	214	**33.53**
9918	18	6	50	230	**36.45**
9920	20	6	50	246	**39.38**
9922	22	6	25	276	**42.30**
9924	24	6	25	292	**45.23**
9926	26	6	25	308	**48.15**
9928	28	6	25	324	**51.08**

Hubbard Carriage Bolts

Hot Galvanized

Carriage bolts are used for attaching the braces to cross-arms on most overhead lines.

Standard heads, square nuts, rolled threads.

3/8-Inch

Cat. No.	Length, Inches Over All	Thread	Std. Pkg.	Weight Pounds per 100	Price per 100
9633	3	1¾	1500	13.2	$3.56
9633½	3½	1¾	1250	14.0	3.90
9634	4	1¾	1000	15.7	4.23
9634½	4½	1¾	900	17.2	4.51
9635	5	1¾	800	18.2	5.08
9635½	5½	1¾	750	19.5	5.37
9636	6	1¾	700	21.6	5.70

1/2-Inch

Cat. No.	Length, Inches Over All	Thread	Std. Pkg.	Weight Pounds per 100	Price per 100
9643	3	2½	800	24.3	$6.28
9643½	3½	3	700	26.6	6.70
9644	4	3	600	29.3	7.13
9644½	4½	3	500	32.4	7.55
9645	5	3	450	35.1	7.98
9645½	5½	3	400	37.5	8.41
9646	6	3	350	40.0	8.84

Hubbard Lag Screws

Hot Galvanized

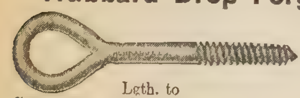
Fetter Drive

Gimlet Point

Fetter drive lag screws have become practically standard for construction work because of their greater holding power. Threads do not tear the wood. Gimlet point screws will be furnished for ¼-inch and 5/16-inch, fetter drive screws for ⅜, ½ and ⅝-inch.

Cat. No.	Lgth. In.	Std. Pkg.	Wt. Lbs. per 100	Price per 100	Cat. No.	Lgth. In.	Std. Pkg.	Wt. Lbs. per 100	Price per 100
1/4-Inch									
9722	2	6000	2.8	$2.35	9722½	2½	5000	3.5	$2.55
5/16-Inch									
9732	2	4500	4.7	$2.35	9733	3	2500	6.8	$2.80
9732½	2½	3000	5.6	2.55	9733½	3½	2000	7.8	3.05
3/8-Inch									
9742¼	2¼	3000	7.8	$3.10	9744	4	1500	12.3	$4.00
9742½	2½	2500	8.3	3.10	9744½	4½	1250	13.9	4.30
9743	3	2000	10.	3.40	9745	5	1000	15.4	4.65
9743½	3½	1500	11.6	3.70	9746	6	800	17.1	5.35
1/2-Inch									
9752½	2½	1200	16.7	$4.85	9755	5	600	29.2	$7.10
9753	3	1100	19.	5.30	9755½	5½	550	30.8	7.55
9753½	3½	1000	21.3	5.75	9756	6	500	34.8	8.00
9754	4	800	23.6	6.20	9756½	6½	450	39.3	8.45
9754½	4½	700	25.3	6.65	9757	7	400	42.2	8.90
5/8-Inch									
9764	4	550	37.7	$8.80	9765½	5½	400	50.2	$10.75
9764½	4½	500	41.8	9.45	9766	6	350	54.6	11.40
9765	5	450	46.0	10.10	......	...	....	....	.....

Hubbard Drop Forged Screw Eye Bolts



Hot Galvanized

Has drop forged oval eye and 3 inches of gimlet lag screw thread.

Cat. No.	Lgth. to Ctr. of Eye, In.	Diam. In.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9930	7	½	100	50	$33.50
9931	7¾	⅝	100	75	44.50
9932	7¾	¾	50	95	55.50

Hubbard Double Arming Bolts

Hot Galvanized

The double arming bolt, used with four square washers, represents a much more economical means of tying cross arms together than the old method of a wooden block with a hole through it and a long machine bolt.

The points are finished and prices include four square nuts but no washers.

Cat. No.	Length, Inches Over All	Thread	Std. Pkg.	Approx. Shipping Wt., Lbs. per 100	Price per 100
1/2-Inch					
9842	12	5	100	101	$17.38
9844	14	6	100	109	18.62
9846	16	6	100	117	19.70
9848	18	8	100	125	21.05
9850	20	8	100	133	22.23
9852	22	8	50	148	23.70
9854	24	8	50	156	24.88
5/8-Inch					
9862	12	5	50	150	$28.00
9864	14	6	50	166	29.77
9866	16	7	50	182	31.53
9868	18	8	50	198	33.15
9870	20	8	50	214	34.83
9872	22	8	50	230	36.48
9874	24	8	50	246	38.13
3/4-Inch					
9882	12	5	50	234	$40.30
9884	14	6	50	254	42.78
9886	16	6	50	274	45.18
9888	18	8	25	308	47.95
9890	20	8	25	328	50.40
9892	22	8	25	348	53.60
9894	24	8	25	368	56.05

Hubbard Drop Forged Eye Bolts

Hot Galvanized

With drop forged oval eyes. All standard eye bolts are rolled threaded 6 inches except the 6-inch bolt which is rolled threaded 4 inches. The D. A. eye bolts have cut threads up to within 1½ inches of the eye.

Cat. No.	Lgth. to Center of Eye Inches	Std. Pkg.	Wt. Lbs. per 100	Price per 100	Cat. No.	Lgth. to Center of Eye Inches	Std. Pkg.	Wt. Lbs. per 100	Price per 100
1/2-Inch—Size of Eye, Inside ¾x1-Inch									
9936	6	100	47	$25.73	9944	14	100	95	$29.35
9938	8	100	59	26.95	9946	16	100	107	30.77
9940	10	100	71	27.00	9948	18	100	119	31.52
9942	12	100	83	28.08	9950	20	100	131	32.63
5/8-Inch—Size of Eye, Inside 1½x2-Inch									
9956	6	100	103	$32.30	9964	14	50	158	$38.78
9958	8	100	115	34.10	9966	16	50	170	41.18
9960	10	100	127	35.13	9968	18	50	182	42.98
9962	12	50	146	36.90	9970	20	50	194	44.85
3/4-Inch—Size of Eye, Inside 1½x2-Inch									
9976	6	50	154	$47.00	9984	14	50	218	$57.90
9978	8	50	170	50.65	9986	16	50	234	61.25
9980	10	50	186	51.70	9988	18	50	250	64.37
9982	12	50	202	54.55	9990	20	50	266	67.23

5/8-Inch Double Arming Eye Bolts—3 Nuts

Cat. No.	Lgth. to Center of Eye Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
9786	16	50	194	$71.23
9788	18	50	214	73.17
9790	20	50	234	75.40

3/4-Inch Double Arming Eye Bolts—3 Nuts

Cat. No.	Lgth. to Center of Eye Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
9796	16	25	284	$88.29
9798	18	25	308	91.36
9800	20	25	330	94.43

Hubbard Flat Cross Arm Braces

Hot Galvanized

Made only from new open hearth steel.

1 7/32x7/32-Inch

Cat. No.	Length Inches	Ship. Wt., Lbs. per 100	Price per 100	Cat. No.	Length Inches	Ship. Wt., Lbs. per 100	Price per 100
8020	20	142	$16.35	8028	28	198	$22.02
8022	22	156	17.76	8030	30	212	23.51
8024	24	170	19.18	8032	32	226	24.92
8026	26	184	20.60	....	..	...	......

1 1/4x1/4-Inch

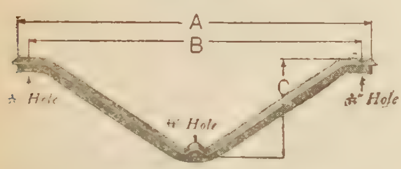
Cat. No.	Length Inches	Ship. Wt., Lbs. per 100	Price per 100	Cat. No.	Length Inches	Ship. Wt., Lbs. per 100	Price per 100
8120	20	167	$17.73	8128	28	233	$24.01
8122	22	183	19.29	8130	30	250	25.64
8124	24	200	20.84	8132	32	266	27.19
8126	26	216	22.40	....	..	...	......

Hubbard Vertical Braces

Cat. No.	No. of Arms	Length Over All Inches	Spacing Inches	Size Angle Inches	Ship. Wt., Lbs. per 100	Price per 100
7976	2	20	18	1½x1½x3/16	300	$53.70
7977	3	38	18	1½x1½x3/16	520	92.75
7978	4	56	18	1½x1½x3/16	840	132.80
7986	2	26	24	1½x1½x3/16	380	69.33
7987	3	50	24	1½x1½x3/16	700	123.20
7988	4	74	24	1½x1½x3/16	1040	175.75

Hubbard Angle Cross Arm Braces

Hot Galvanized



Furnished to specifications. Give dimensions, A, B, C, as indicated on illustration, and state size of angle.

Cat. No.	Size, Angle Inches	Dimensions, In. A	B	C	Std. Pkg.	Wt., Lbs. per 100	Price per 100
7950	1½x1½x3/16	40	37	12	5	710	$114.58
7952	1½x1½x3/16	51	48	14¾	5	890	135.62
7953	1¾x1¾x3/16	63	60	18	5	1280	182.80
7954	1¾x1¾x3/16	69	66	20	5	1410	201.05
7955	1¾x1¾x3/16	75	72	18	5	1490	206.72
7956	2 x2 x3/16	75	72	22	5	1780	245.25
N.E.L.A. Standard							
7940	1½x1½x3/16	45	42	12	5	780	$123.85
7941	1½x1½x3/16	51	48	18	5	970	143.90
7942	1½x1½x3/16	63	60	18	5	1100	159.32
7943	1¾x1¾x3/16	75	72	22	5	1560	217.12

Hubbard Alley Arm Braces

Hot Galvanized

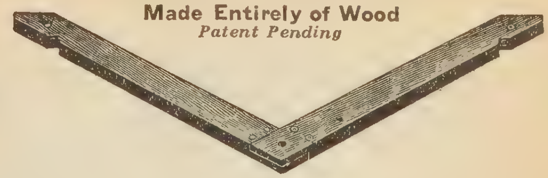
Where it is necessarv for lines to be run adjacent to buildings or trees the Hubbard Alley Arm Brace furnishes an exceptionally rigid and economical construction. Angle is bent at each end to 45 degrees. Brace is pierced at each end with 9/16-inch holes in both legs of the angle, permitting installation as desired, underneath or on the side of the crossarm. Each brace is furnished with a sturdy step which is firmly riveted in place at the mid-point.

Stock No.	Description	Length Feet	Std. Pkg.	Approx. Ship. Wt., Lbs. per 100 Pcs.	Price per 100
7996	1¾x1¾x3/16	6	5	1560	$263.30
7998	Steel Angle	8	5	2000	337.50

Rainier Crossarm Braces

Made Entirely of Wood

Patent Pending



Provides all advantages of all-wood construction without reducing strength or life of pole structure or increasing its cost. Withstands greater stresses than balance of the pole structure; adequately survives shock and abuse.

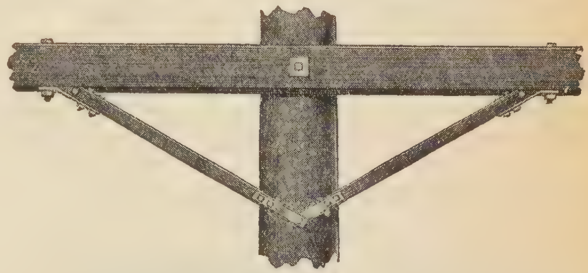
Treated with 10 pounds of coal tar creosote per cubic foot of timber. Especially suitable near salt water or under corrosive atmospheric conditions.

The right and left-hand members are identical. The bolt holes fit and only three bolts are required to install a pair. They are interchangeable with double span steel braces.

This brace complies with crossarm freight classifications. Rainier Braces and Crossarms can be shipped in mixed carloads without sacrificing the carload freight rate.

No.	Each	Size Inches	Span Inches	Drop Inches	Wt., Lbs. per Pair
1	.....	1½x2¼x30	38	18	5.50
2	.....	2 x3 x32 7/16	42	12½	10
3	.....	2 x3 x35¾	48	14½	11
4	.....	2 x3 x42⅝	60	18	13
5	.....	2 x3 x46 3/16	66	20	14.26
6	.....	2 x3 x49½	72	21½	15.28

Hubbard 2-Piece Wood Crossarm Braces



Made of hickory, 1½ inch square, treated with creosote and fitted with hot galvanized steel fittings. Has high insulating properties. Mounted to crossarm with ½-inch bolts and to pole with ⅝-inch machine bolts.

Also supplied in dip-treated fir or creosoted yellow pine.

Other types of standard single and hinged braces also available.

Cat. No.	Per 100	Dimensions, In. Between C.A. Mounting Holes	Drop	Shipping Weight Pounds per 100
5537	$131.30	37	12	550
5542	135.00	42	12	580
5547	142.50	48	14¾	640
5560	150.00	60	18	735
5566	165.00	66	20	785
5572	180.00	72	22	850

Hubbard Alley Arm Braces

Hot Galvanized

Forged Ends

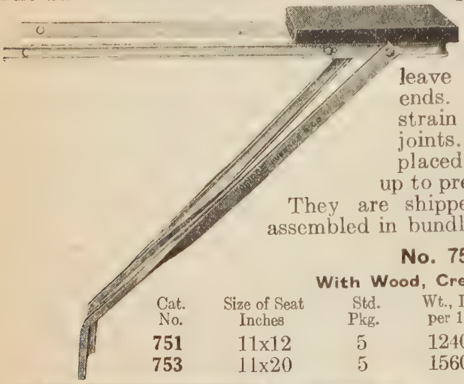
Cat. No.	Size Angle Inches	Length Feet	Std. Pkg.	Wt., Lbs. 100 Pcs.	Price per 100
7979	1¾x1¾x3/16	5	5	1240	$215.82
7981	1½x1½x3/16	5	5	1100	183.98
7982	1½x1½x3/16	6	5	1300	207.60
7984	1¾x1¾x3/16	7	5	1760	267.78
7985	2 x2 x¼	10	5	3800	544.60

Hubbard Pole Seats

Hot Galvanized

The frames and braces of all styles are of 1x½-inch channel steel. The wood seats are 1⅛-inch cypress, boiled in creosote. The bars of the all steel seats are ⅜-inch square steel, let into the frame in such manner as to leave no projecting ends. There is no strain on the riveted joints. The bars are placed with corners up to prevent slipping.

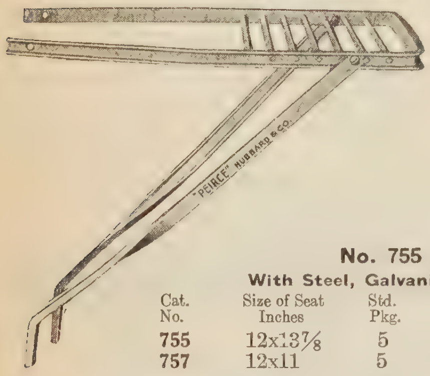
They are shipped completely assembled in bundles of five.



No. 751

With Wood, Creosoted Seat

Cat. No.	Size of Seat Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
751	11x12	5	1240	**$250.00**
753	11x20	5	1560	**365.00**



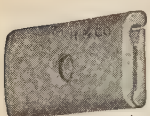
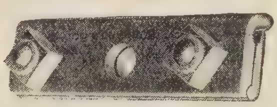
No. 755

With Steel, Galvanized Seat

Cat. No.	Size of Seat Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
755	12x13⅞	5	1420	**$315.60**
757	12x11	5	1380	**301.50**

Hubbard Cable Suspension Clamps

Hot Galvanized

These are the standard A. T. & T. Company's Cable suspension clamps, the one-bolt type being used for light cables and on cable arms, and the three-bolt clamp for heavy cables and long spans. The one-bolt clamp is furnished without a bolt, as the ⅝-inch through bolt is used both for attaching the clamp to the pole and tightening the clamp on the stand. The three-bolt clamp is furnished with two ½-inch high carbon steel guy clamp bolts.

Cat. No.	Type	Length In.	Size Strand In.	Std. Pkg	Wt., Lbs. per 100	Price per 100
8901	1-Bolt	2⅜	¼ to 7/16	250	84	**$16.72**
8903	3-Bolt	5⅝	¼ to 7/16	75	221	**43.28**

Hubbard Reinforcing and Safety Straps

For Suspension Clamps

Hot Galvanized

No. 8905

No. 8906

No. 8907

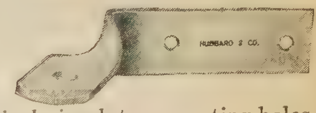
No. 8905 is used to support the messenger bolt at points of extreme stress, such as long spans. No. 8906 is a Safety Strap to prevent the cable's falling if the hangers give way. No. 8907 is a combination of Nos. 8905 and 8906.

Reinforcing Straps

Cat. No.	Size Steel Inches	Wt., Lbs. per 100	Price per 100
8905	1½x⅛	36	**$27.20**
8906	1¾x⅛	76	**39.13**
8907	1¾x⅛	116	**66.33**

Hubbard Telephone Corner Brackets

Hot Galvanized



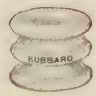
Used where the lead from the pole comes to the building at an angle.

Mounting and insulator holes on Nos. 9204 and 9205 are 11/32 inch. Mounting holes on Nos. 9206 and 9207 are 11/32 inch, insulator mounting holes, 13/32 inch.

Porcelain knobs and bolts listed below are used on these brackets but are not included in the price.

Cat. No.	Size Steel Inches	Length Legs Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9204	1 7/32x7/32	5⅝x2½	250	60	**$26.60**
9205	1 7/32x7/32	10⅛x1 5/16	200	87	**31.53**
9206	1½x3/16	4¾x2½	250	60	**17.50**
9207	1½x¼	4¾x4½	200	110	**20.50**

Hubbard Porcelain Knobs for Telephone Brackets



No. 9225

These knobs are of dry process white glazed porcelain, and are for use with the telephone brackets listed above.

No. 9226

Cat. No.	Type	Dimen., Inches Diam. Bolt Hole	Height	Ship. Wt., Lbs. per 100	Price per 100
9225	Two-Groove	⅜	1½	20	**$7.70**
9226	Four-Groove	½	2¼	36	**13.20**

Hubbard Bolts for Telephone Brackets

Hot Galvanized

For attaching porcelain knobs to telephone brackets.

Cat. No.	Type	Diam. Inches	Length Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9232	Stove Bolt	5/16	2	3000	6.0	**$2.48**
9603	Machine Bolt	⅜	3	1500	12.6	**3.71**
9605½	Machine Bolt	⅜	5½	750	19.8	**5.56**

Hubbard Telephone Distributing Brackets

Hot Galvanized

No. 9200

Cat. No.	Style Bracket	Dimen., Inches Size of Steel	Length of Legs	Approx. Ship. Wt., Lbs. per 100	Price per 100
9202	L Pole	2 x¼	3 x3¾	87	**$17.58**
9200	L House	1¾x3/16	2⅞x3¼	51	**12.13**

Hubbard Telephone Knob Screw Insulators

Hot Galvanized

No. 2920 knob and screw. The screw is ⅜-inch in diameter and threaded for 1½ inches.

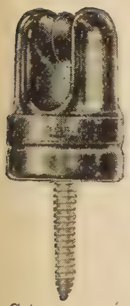
No. 2927 knob is used with No. 2920 screw. It is made of brown glazed dry process porcelain and is 1½ inches high and 1¾ inches in diameter. Wire groove is ½-inch wide. Hole, ½-inch in diameter, is well rounded on outer edges to prevent cutting insulation of wire.

Cat. No.	Per 100	Standard Package	Wt., Lbs. per 100
2920	**$13.60**	500	48
2927	**8.40**	100	29

GraybaR
QUALITY
Since 1869
Distributed and guaranteed by
GraybaR
ELECTRIC COMPANY

Peirce Telephone Wireholders

All-Porcelain Type



Combines a wall bracket, insulator and screw all in one. Used as a corner bracket where the lead from the pole comes to the building at an angle and as a standard house bracket for carrying the pairs on a straight run along the building or for dead-ending.

The double groove on the top makes an ideal arrangement for tying in twisted telephone pairs.

No metal is exposed after installation. The wireholder is not affected by atmospheric conditions and will not make rust stains on the house.

Cat. No.	Equipped with	Wire Hole Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
1622	No. 20x2-In. Galv. Screw	9/16x¾	50	60	**$15.80**
1632	No. 20x2-In. Brass Screw	9/16x¾	50	60	**18.80**

No. 8918 Hubbard Span Clamps

Hot Galvanized

Used when service connections are made at points between poles. Equipped with No. 8901 suspension clamp and bolt. Insulator spacing, 5¾ inches.

Standard package, 125. Weight per 100. 138 pounds.

Price, No. **8918**............................per 100 **$77.50**

No. 9214 Peirce Porcelain Knobs for Telephone Racks

Made of brown glazed dry process porcelain.

The wire groove is divided by a fin which keeps the two wires of the twisted pair separated.

Cat. No.	Dimensions, In. Height	Diameter	Wire Groove	Bolt Hole	Ship. Wt., Lbs. per 100	Price per 100
9214	1½	1¾	¾	25/64	22.7	**$9.00**

Peirce Distributing Knob Racks

Hot Galvanized

For Telephone Wires

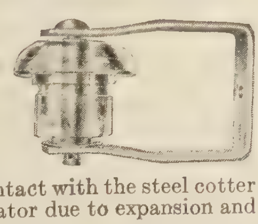
These racks furnish a secure but inexpensive means for distributing twisted pair telephone wires from cable poles. Nos. 2900, 2901 and 2902 are made with 1¾-inch channel steel back. The holes take a ½-inch lag screw.

Cat. No.	Length Inches	No. of Knobs	Wt., Lbs. per 100	Price per 100
2900	10⅝	4	328	**$83.40**
2901	13¾	6	440	**110.40**
2902	16⅞	8	805	**137.50**

The above prices are for racks complete with knobs.

Hubbard Dead-Ending Shackles

Hot Galvanized



Used for dead-ending or breaking bare signal wires. Shackle clamps around cross arm, which gives it greater holding power than pin construction. A ⅜-inch lag screw is used to prevent displacement by creeping.

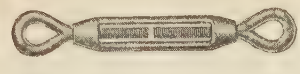
A lead washer and sleeve prevent glass insulator from coming into contact with the steel cotter bolt, eliminating breakage of insulator due to expansion and contraction.

Size, 3/16x13/16 inches. Shackle is for 3¼x4¼-inch cross arm.

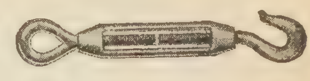
Cat. No.	Description	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9290	Shackle Complete less Insulator....	75	241	**$67.10**
9291	Glass Insulator..........................	100	175	**44.90**
9292	Wet Process Porcelain Insulator....	50	175	**58.30**

Hubbard Drop Forged Turnbuckles

Hot Galvanized



Eye and Eye



Eye and Hook

All Hubbard Turnbuckles including bodies, hooks, eyes and clevises are drop forged steel, insuring reliability and strength.

The sizes listed below are carried in stock. However, special assemblies can be made.

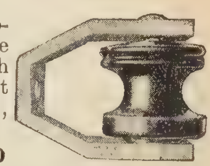
Diam. Bolt In.	Open In.	Closed In.	Length Opening In.	Width Eye In.	Length Eye In.	Opening Hook In.	Opening Clevis In.	Ship Wt., Lbs. per 100
⅜	16½	10½	6	9/16	⅞	½	½	85
½	17¾	11¾	6	¾	1	⅝	⅝	160
½	23¾	14¾	9	¾	1	⅝	⅝	185
½	29¾	17¾	12	¾	1	⅝	⅝	210
⅝	19½	13½	6	1½	2	¾	¾	260
⅝	25½	16½	9	1½	2	¾	¾	310
⅝	31½	19½	12	1½	2	¾	¾	360
¾	20	14	6	1½	2	⅞	¾	370
¾	26	17	9	1½	2	⅞	¾	430
¾	32	20	12	1½	2	⅞	¾	490

Size, Inches	Cat No. — Type of Assembly: Eye and Eye	Eye and Hook	Eye and Clevis	Hook and Hook	Hook and Clevis	Clevis and Clevis
⅜x 6	8601	8621	8641	8661	8681	8701
½x 6	8602	8622	8642	8662	8682	8702
½x 9	8603	8623	8643	8663	8683	8703
½x12	8604	8624	8644	8664	8684	8704
⅝x 6	8605	8625	8645	8665	8685	8705
⅝x 9	8606	8626	8646	8666	8686	8706
⅝x12	8607	8627	8647	8667	8687	8707
¾x 6	8608	8628	8648	8668	8688	8708
¾x 9	8609	8629	8649	8669	8689	8709
¾x12	8610	8630	8650	8670	8690	8710

Prices upon application.

No. 561 Hubbard Insulated Forks

Hot Galvanized



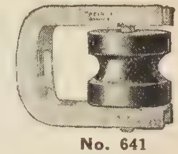
Made of 1¼x½-inch channel. Equipped with insulator No. 355. Oval hole 11/16x¾-inch in back permits through bolt to be assembled to clevis without removing insulator. Standard package, 50. Weight per 100, 182 pounds.

Price, No. **561**..........per 100 **$42.10**

Hubbard Insulated Forks

Hot Galvanized

No. 8820



No. 641

By the addition of a standard ⅝-inch through bolt, lag screw or carriage bolt, the insulated forks illustrated may be converted into fork bolts, which simplifies considerably the keeping of stocks.

Fork No. 8820 is made of 1½x¼-inch flat steel, formed so that the head of the through bolt keeps it from turning. It is equipped with insulator No. 357, which is attached by a ⅜-inch bolt.

No. 641 is made of 1¼x½-inch channel steel and is provided with a square bolt hole, into which the square shoulders of a carriage bolt fits, preventing the fork from turning around on the bolt. Insulator No. 357 is also furnished with this fork.

Cat. No.	Type	Kind of Bolt	Std. Pkg.	Approx. Ship. Wt., Lbs. per 100	Price per 100
8820	Flat Steel	⅝-Inch Through Bolt	100	119	**$31.70**
641	Channel Steel	⅝-Inch Carriage Bolt	100	115	**26.40**

Hubbard Standard Western Union Pins

Made in accordance with the specifications of the Western Union Telegraph Co., and the Railway Signal Association. The cobs are of the best grade of air dried oak, turned to fit a gauge and boiled in paraffine to exclude all moisture. The pins are made of stiff, high carbon steel with clean threads, square nuts and clipped, round washers, and are for use with standard insulators having 1-inch pin holes.

Long Shank Pins for Wood Cross Arms

Cat. No.	Diam. In.	Length, In. Above Shoulder	Below Shoulder	Std. Pkg.	Wt. Lbs. per 100	Price, per 100 Plain	Galv.
8000	½	4¼	5	325	73	$17.37	$19.67
8005	⅝	4¼	5	250	104	21.65	25.45
Lag Screw Pins for Wood Arms and Poles							
8006	½	4¼	3	400	56	.....	$18.50
8007	⅝	4¼	3	350	90	.....	27.50

Hubbard Standard Western Union Pins

Hot Galvanized

Cobs are of the best grade of air dried oak, turned to fit a gauge and boiled in paraffin to exclude moisture. Pins are of stiff, high carbon steel with clean threads, square nuts and clipped round washers, and are for use with standard insulators having 1-inch pin holes.

Short Shank Pins

For Steel Cross Arms, Transposition Brackets and Break Irons

Cat. No.	Diam. In.	Length, Inches Above Shoulder	Below Shoulder	Std. Pkg.	Wt., Lbs. per 100	Price per 100
8010	½	4¼	1	500	48	$22.12
8015	⅝	4¼	1	400	71	27.15
8015A	⅝	4¼	1⅜	400	73	29.35
With Long Cob for Transposition Insulators						
8011	½	5	1	400	53	$24.62
8016	⅝	5	1	300	71	29.65

Hubbard Wood Top Pins

Hot Galvanized

With Steel Bolts

Wood top pins are composed of seasoned locust tops, thoroughly impregnated with paraffine and stiff steel fin bolts. They are made in a variety of heights with short and long shanks for wood, angle or channel steel arms, and for two sizes of insulator pin holes, 1 and 1⅜ inches in diameter. Furnished with nut and washer.

Packed in barrels and kegs in quantity desired.

Cat. No.	Size of Wood Top Inches Diam. Top	Diam. Bottom	Length	Size of Bolt, In. Diam.	Length	Length of Bolt Below Top, In.	Wt. Lbs. per 100	Price per 100
8070	1	1⅞	4½	½	5½	1	55	$21.48
8071	1	2¼	5¼	½	6½	1¼	71	27.25
8072	1⅜	2¼	4½	⅝	5½	1	100	33.50
8073	1⅜	2¼	5¼	⅝	6½	1¼	104	35.75
8074	1	1⅞	4½	½	9½	5	79	24.58
8075	1	2¼	5¼	½	10½	5¼	92	30.15
8076	1	2¼	5¼	½	11½	6¼	103	30.53
8077	1⅜	2¼	4½	⅝	9½	5	134	39.08
8078	1⅜	2¼	4½	⅝	10½	6	142	40.58
8079	1⅜	2¼	5¼	⅝	10½	5¼	149	40.58
8080	1⅜	2¼	6½	⅝	12½	6	186	45.28
8081	1⅜	2½	8	⅝	14	6	225	54.42
8082	1⅜	2¾	9	⅝	16	7	250	60.00

No. 3825 Peirce Forged Steel Pins

Hot Galvanized

For Railway Feeders

For use with composition feeder insulators at points of excessive load.

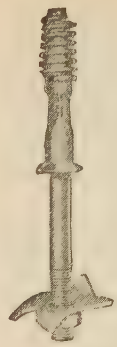
Weight, pounds, per 100, 276. Std. pkg. 50.

Cat. No.	Length, In. Above Shoulder	Below Shoulder	Diam., In. Shank	Shoulder	Thread	Price per 100
3825	4¼	3⅞	1¼	2½	1	$83.00

Peirce Long Shank Forged Steel Pins With 1-Inch Spring Thread

For Wood Cross Arms

Hot Galvanized



Cat. No.	Diam. In.	Length, Inches Above Shoulder	Below Shoulder	Total	Std. Pkg.	Wt. Lbs. per 100	Price per 100
71	½	4¾	4¾	9½	125	108	$24.70
74	½	4¾	5½	10¼	100	96	29.50
80	⅝	4¾	4¾	9½	100	125	30.70
81	⅝	4¾	5½	10¼	100	149	32.50
81A	⅝	4¾	6½	11¼	100	144	33.30
82	⅝	6	4¾	10¾	100	137	35.10
84	⅝	6	5½	11½	100	145	36.50
83	⅝	6	6½	12½	100	155	38.40
90A	¾	4¾	5¾	10½	75	189	45.60
90	¾	6	5¾	11¾	75	200	49.20
91	¾	6	6¾	12¾	100	200	52.80

Peirce Short Shank Forged Steel Pins with 1-Inch Spring Thread

For Steel Cross Arms and Brackets

Hot Galvanized

For electric light, telephone and telegraph lines, on which insulators with 1-inch pin holes are used, this pin possesses all the advantages of the well known Western Union type of pin.

The method of fastening the spring thread to the pin allows for expansion and contraction of the insulator but does not lock the insulator to the pin.

Cat. No.	Diam. In.	Length, Inches Above Shoulder	Below Shoulder	Total	Std. Pkg.	Wt., Lbs. per 100	Price per 100
72	½	4¾	1¼	6	200	81	$25.80
86	⅝	4¾	1¼	6	200	100	28.40
87	⅝	6	1¼	7¼	150	113	30.90
93A	¾	4¾	1½	6¼	150	135	32.00
93	¾	6	1½	7½	125	164	36.20

Peirce Long Shank Forged Steel Pins

With Standard 1-Inch Lead Threads for Low Voltage Insulators

For Wood Cross Arms

Hot Galvanized

Cat. No.	Diam. In.	Length, Inches Above Shoulder	Below Shoulder	Total	Std. Pkg.	Wt., Lbs. per 100	Price per 100
971	½	4¾	4¾	9½	100	129	$24.70
974	½	4¾	5½	10¼	100	130	29.50
980	⅝	4¾	4¾	9½	100	168	30.70
981	⅝	4¾	5½	10¼	100	175	32.50
981A	⅝	4¾	6½	11¼	100	149	33.30
982	⅝	6	4¾	10¾	100	173	35.10
984	⅝	6	5½	11½	100	185	37.50
983	⅝	6	6½	12½	100	189	38.40
990A	¾	4¾	5¾	10½	75	208	45.60
990	¾	6	5¾	11¾	100	205	49.20
991	¾	6	6¾	12¾	100	215	52.80

Peirce Short Shank Forged Steel Pins

With Standard 1-Inch Lead Threads for Low Voltage Insulators

Hot Galvanized

For Steel Cross Arms and Brackets

Cat. No.	Diam. In.	Length, Inches Above Shoulder	Below Shoulder	Total	Std. Pkg.	Approx. Wt., Lbs. per 100	Price per 100
972	½	4¾	1¼	6	175	108	$25.80
986	⅝	4¾	1¼	6	150	121	28.40
987	⅝	6	1¼	7¼	100	137	30.90
993A	¾	4¾	1½	6¼	100	159	32.00
993	¾	6	1½	7½	100	119	36.20

Peirce Lag Screw Forged Steel Pins

With Standard 1-Inch Lead Threads for Low Voltage Insulators

Hot Galvanized

For Pole and Transformer Wiring

Cat. No.	Diam. In.	Length, Inches Above Shoulder	Below Shoulder	Total	Std. Pkg.	Approx. Wt., Lbs. per 100	Price per 100
973	½	4¾	3	7¾	100	114	$24.10
975	½	6	3	9	100	116	27.00
988	⅝	4¾	3	7¾	150	130	27.00
989	⅝	7½	4	11½	100	159	33.00
994	¾	6	4	10	100	162	38.10

Peirce Broad Base Forged Steel Pins

Hot Galvanized

Designed for supporting heavy primary and secondary lines on wood cross arms. Base is 2½ inches wide and made in two styles, for flat top arms and for roofed arms.

Shank, ⅝ inch in diameter, is provided with 2½-inch cut thread.

Spring Thread for 1-In. Pin Hole

Std. Pkg. No. 1081, 75; No. 1080, 100.

Cat. No.	Base	Above Arm In.	Length Shank In.	Ship. Wt., Lbs. per 100	Price per 100
1081	Flat	4½	5½	148	$57.80
1080	Curved	4½	5½	178	63.00

Lead Thread for 1-In. Pin Hole

Standard package, 125.

Cat. No.	Base	Above Arm In.	Length Shank In.	Ship. Wt., Lbs. per 100	Price per 100
1091	Flat	4½	5½	175	$57.80
1090	Curved	4½	5½	205	63.00

Flat Base   Curved Base

Peirce Lag Screw Type Forged Steel Transformer Pins

Hot Galvanized

The Peirce Screw Type Pins are in popular use as transformer pins for running leads from the line cross arm to the transformer arm, also for pole work such as running leads from the lighting circuit down the pole to the lighting fixtures.

Spring Thread

Cat. No.	Diam. In.	Length, Inches Above Shoulder	Below Shoulder	Total	Std. Pkg.	Wt., Lbs. per 100	Price per 100
73	½	4¾	3	7¾	175	87	$24.10
75	½	6	3	9	150	87	27.00
88	⅝	4¾	3	7¾	100	88	27.00
89	⅝	7½	4	11½	100	120	33.00
94	¾	6	4	10	100	145	38.10

No. 125 Peirce Lag Screw Type Forged Steel Transformer Pins

Broad Base

Hot Galvanized

For running leads from the line cross arm to the transformer arm, also for pole work such as running leads from the lighting circuit down the pole to the lighting fixtures.

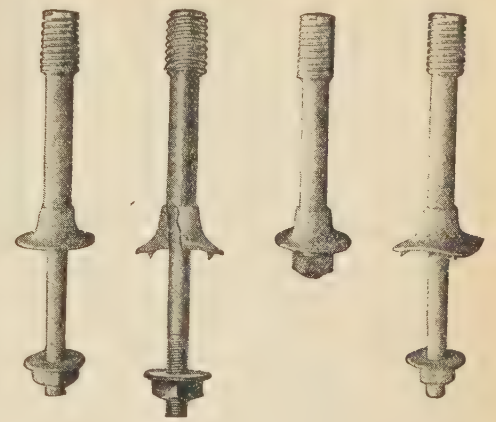
Furnished with No. 22x2-inch wood screw. Diameter pin thread, 1 inch.

Spring Thread

Cat. No.	Length, In. Above Shoulder	Over All	Diam. Base In.	Std. Pkg.	Wt. Lbs. per 100	Price per 100
125	5	7	2	175	77	$28.40

Hubbard-OB Crossarm Pins

Hot Galvanized



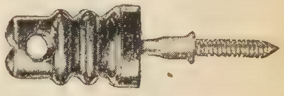
Pins have bases designed to give 100 per cent contact area with the top of the arm, developing the full strength of the wood area involved, and extra strength in the shanks which pass through the cross-arm.

The body portion is made of high grade cold drawn steel. A conical section fits into a corresponding socket in the forged steel base, as illustrated by the cut-away view, the two parts acting as a unit under load. Obtainable with permanent bond lead threads and separable cut steel thimbles.

Complete tabulations covering pins for roofed and flat top arms and flat steel arms sent upon request.

Hubbard Primary Lead Insulators

No. 1650



No. 1660

These insulators have great strength and large leakage distance for high flashover resistance. Ample factor of safety for primary voltages.

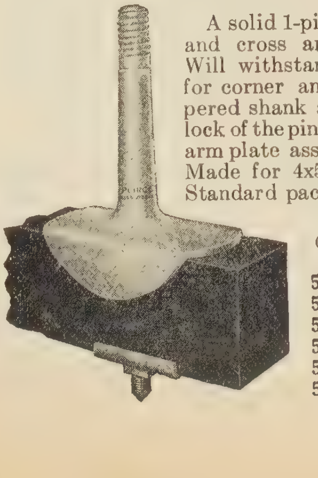
Made of high grade wet process porcelain.

Wire hole, 1-inch.

Cat. No.	Per 100	Size of Screw	Extension of Wire Inches	Wt. Lbs. per 100
1650	$69.50	No. 22x2″ Brass	3½	200
1660	99.90	½″x3″ Galv. Lag	5½	230

Peirce Forged Steel Corner Pins

Hot Galvanized

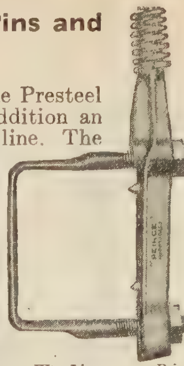


A solid 1-piece forging with 8-inch base and cross arm clamping arrangement. Will withstand 4000 pounds side strain for corner and angle construction. Tapered shank and wings provide a wedge-lock of the pin to cross arm; broad flat cross arm plate assists in reinforcing cross arm. Made for 4x5-inch flat top cross arms. Standard package, 10

Cat. No.	Length Shoulder Inches A-bove	Be-low	Over All	Wt. Lbs. per 100	Price per 100
5428	8	6½	14½	837	$194.90
5430	9	6½	15½	882	202.80
5432	10	6½	16½	927	211.20
5434	11	6½	17½	959	223.20
5436	12	6½	18½	994	233.20
5064	4x5 Cross Arm Plate			110	14.40

Peirce Drop Forged Clamp Pins and Corner Plates

Hot Galvanized



This pin has all the advantages of the Presteel and channel type clamp pins and in addition an assembly for angles and corners in the line. The reinforcing plate for corner construction holds the pin rigid against strains of 1200 pounds in any direction. On straight lines the pin is used without the plate and is prevented from shifting by two ¼-inch lugs.

Made for flat and roofed top arms from 3¼x4¼ to 4x5 inches.

Pins

Cat. No.*	Type of Thread	Pin Ht. Above Arm In.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
4410	1″ Spring	4¾	50	148	$35.40
4420	1″ Lead	4¾	25	165	35.40

Reinforcing Plates

Standard package, 100.

Cat. No. Flat Top Arm	Cat. No. Roofed Top Arm	Size Arm In.	Use Strap No.	Wt. Lbs. per 100	Price per 100
5071	5081	3¼x4¼	1001	107	$16.40
5072	5082	3½x4½	1002	111	16.70
5073	5083	3¾x4¾	1003	115	17.40
5074	5084	4 x5	1004	119	17.50

Peirce Clamp Pins

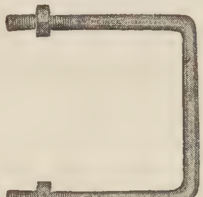
Hot Galvanized

Designed for angle and corner construction and will withstand strains of 2500 pounds without deflection. Each pin is forged from a single piece of new hot rolled open hearth steel and is so constructed that the greatest amount of metal is at the point where the strain is the hardest. Broad base rests evenly on arm, 4 lugs hold pin from turning on the cross arm.

For Flat Top Arm Inches	Pin Ht. Above Arm In.	1-In. Spring Thrd. Cat. No.	Approx. Ship. Wt., Lbs. per 100 Pcs.	Std. Pkg.	1-In. Lead Thrd. Cat. No.	Approx. Ship. Wt., Lbs. per 100 Pcs.	Std. Pkg.	Price per 100
3¼x4¼	5½	4310	348	50	4320	368	25	$55.50
3½x4½	5½	4311	348	65	4321	368	50	55.50
3¾x4¾	5½	4312	412	50	4322	432	50	65.70
4 x5	5½	4313	412	50	4323	432	50	65.70

Hubbard Cross Arm U-Bolts

Hot Galvanized

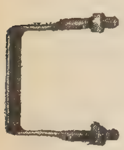


Formed from ⅜-inch round steel.

Cat. No.	Dimen., Inches Size Arm	Dimen., Inches Diam.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
1021	3¼x4¼	⅜	300	48	$9.90
1022	3½x4½	⅜	300	54	9.90
1023	3¾x4¾	⅜	300	60	9.90
1024	4 x5	⅜	250	66	9.90

Peirce Cross-Arm Straps

Hot Galvanized



Drop forged from round steel and have a broad flat bearing on the arm, which helps to hold the pins firmly upright. By drop forging from round stock, freedom from flaws is assured, and the threads are always uniform in size.

Light Cross-Arm Straps

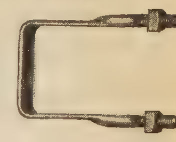
Cat. No.	Size of Arm Inches	Size Strap, Inches Flat	Size Strap, Inches Round	Std. Pkg.	Wt., Lbs. per 100	Price per 100
1001	3¼x4¼	3/16x1⅛	½	100	81	$20.10
1002	3½x4½	3/16x1⅛	½	100	86	20.90
1003	3¾x4¾	3/16x1⅛	½	100	88	21.90
1004	4 x5	3/16x1⅛	½	100	95	23.60

Heavy Cross-Arm Straps

Cat. No.	Size of Arm Inches	Size Strap, Inches Flat	Size Strap, Inches Round	Std. Pkg.	Wt., Lbs. per 100	Price per 100
2001	3¼x4¼	¼x1⅜	⅝	75	132	$25.70
2002	3½x4½	¼x1⅜	⅝	75	138	28.20
2003	3¾x4¾	¼x1⅜	⅝	75	144	29.40
2004	4 x5	¼x1⅜	⅝	75	150	30.90

Peirce Drop Forged Cross-Arm Straps

Hot Galvanized



For attaching broad base clamp pins to cross arms, insulated fuse block clamps to cross arms, channel clamp pins to cross arm in a horizontal position, for running vertical leads between the arms.

Light Cross-Arm Straps

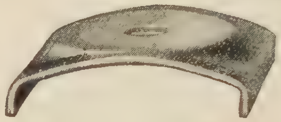
Cat. No.	Size of Arm Inches	Size Strap, Inches Flat	Size Strap, Inches Round	Std. Pkg.	Wt., Lbs. per 100	Price per 100
1871	3¼x4¼	3/16x1⅛	½	100	94	$22.70
1872	3½x4½	3/16x1⅛	½	100	100	24.60
1873	3¾x4¾	3/16x1⅛	½	75	106	27.50
1874	4 x5	3/16x1⅛	½	75	112	29.40

Heavy Cross-Arm Straps

Cat. No.	Size of Arm Inches	Size Strap, Inches Flat	Size Strap, Inches Round	Std. Pkg.	Wt., Lbs. per 100	Price per 100
1881	3¼x4¼	¼x1⅜	⅝	75	126	$23.20
1882	3½x4½	¼x1⅜	⅝	75	133	25.70
1883	3¾x4¾	¼x1⅜	⅝	75	140	28.20
1884	4 x5	¼x1⅜	⅝	75	147	29.90

Peirce Presteel Cross Arm Saddles

Hot Galvanized

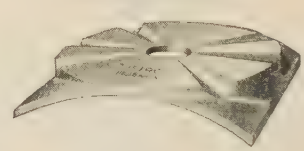


Used with Peirce Forged Steel Pins on round top cross arms. Pressed from No. 7 gauge sheet steel.

Cat. No.	Dimens., Inches Width Cross Arm	Dimens., Inches Size Pin Hole	Approx. Ship. Wt., Lbs. per 100 Pieces	Price per 100
5001	3¼	13/16	103	$11.40
5002	3½	13/16	95	13.00
5003	3¾	13/16	100	14.00
5004	4	13/16	103	14.10
5005	5	13/16	133	17.50
5011	3¼	1 1/16	95	11.40
5012	3½	1 1/16	93	13.00
5013	3¾	1 1/16	95	14.00
5014	4	1 1/16	106	14.10
5015	5	1 1/16	112	17.50

No. 5008 Peirce Malleable Crossarm Saddles

Hot Galvanized



Solid malleable iron with 13/16-inch pin hole and 4⅝-inch radius, adaptable to all sizes of crowned crossarms and provides 100 per cent surface contact.

Grooved for drainage. Holds pin shanks in firm alignment. Fills the void between flat base pins and crossarm crown. Gives pins 35 to 45 per cent more holding strength, proven by actual tests.

Standard package, 100. Weight per 100, 82 pounds.

No. **5008** .... per 100 **$13.80**

Hubbard Spring Lock Washers

Hot Galvanized

Coiled flat from bars of special alloy steel. For use with short shank forged steel pins on steel arms.

Cat. No.	Size Pin Hole, In.	Size of Steel, In.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
5035	9/16	11/64x⅛	100	1.2	$1.30
5036	11/16	13/16x5/32	100	2.2	1.70
5037	13/16	¼x3/16	100	4.5	2.10

Lock Washers

Hot Galvanized

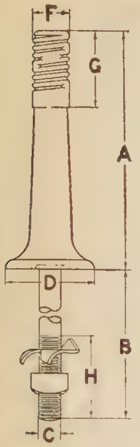
For use on long shank insulator pins to lock nuts on wooden cross arms.

Cat. No.	Size of Pin Hole, In.	Size of Steel, In.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
5039	9/16	14ga.x1¼	500	4.5	$2.40
5040	11/16	12ga.x1¾	500	10	4.80
5041	13/16	12ga.x1¾	500	10	4.80

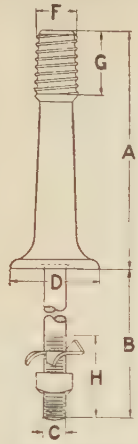
Peirce Forged Steel Pins for Wood Arms

Long Shank

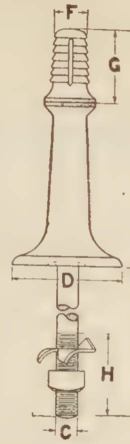
Hot Galvanized



Drawn Separable Thimble Type



Lead Thread Type



Malleable Thimble Type

The Peirce Pin is a solid forging from a single bar of special treated high carbon steel and has neither welds nor joints. Its strength is uniform in all directions. There are no flanges or webs which must be placed in line with the strain. There are no projections to concentrate electrostatic stresses. The full strength of the pin is carried up to the top of the insulator bore. There is no weakness at the base of the thimble as with malleable pins.

With Drawn Zinc Separable Thimbles

For Cementing into Insulators with 1-Inch Pin Hole

Cat. No.	Dimensions, Inches A	B	C	D	F	G	H	Std. Pkg.	Approx. Ship. Wt., Lbs. per 100	Price per 100
5604	4	5½	¾	2½	27/32	2	1¾	125	207	$54.00
5608	5	5½	¾	2½	27/32	2	1¾	125	221	66.90
5612	6	5½	¾	2½	27/32	2	1¾	100	246	69.00
For Cementing into Insulators with 1⅜-Inch Pin Hole										
5624	6	6½	¾	3	1 7/32	2½	2¾	50	404	$91.70
5626	7	6½	¾	3	1 7/32	2½	2¾	50	440	94.80
5628	8	7	¾	3	1 7/32	2½	2¾	50	468	99.20
5630	9	7	¾	3½	1 7/32	2½	2¾	35	585	114.30
5632	10	7	¾	3½	1 7/32	2½	2¾	35	645	119.70
5634	11	7	¾	3¾	1 7/32	2½	2¾	30	726	128.40
5636	12	7	¾	3¾	1 7/32	2½	2¾	30	793	135.90
5638	13	7	¾	3¾	1 7/32	2½	2¾	25	848	138.40

With Lead Threads

For Screwing into Insulators with 1-Inch Pin Hole

Cat. No.	Dimensions, Inches A	B	C	D	F	G	H	Std. Pkg.	Approx. Ship. Wt., Lbs. per 100	Price per 100
5704	4	5½	¾	2½	1	1⅝	1¾	125	240	$65.60
5708	5	5½	¾	2½	1	1⅝	1¾	125	237	67.60
5712	6	5½	¾	2½	1	1⅝	1¾	100	266	69.80
For Screwing into Insulators with 1⅜-Inch Pin Hole										
5724	6	6½	¾	3	1⅜	2⅛	2¾	50	460	$97.80
5726	7	6½	¾	3	1⅜	2⅛	2¾	50	480	100.90
5728	8	7	¾	3	1⅜	2⅛	2¾	50	516	105.10
5730	9	7	¾	3½	1⅜	2⅛	2¾	35	646	119.70
5732	10	7	¾	3½	1⅜	2⅛	2¾	35	674	124.90
5734	11	7	¾	3¾	1⅜	2⅛	2¾	40	840	133.20
5736	12	7	¾	3¾	1⅜	2⅛	2¾	25	872	140.60
5738	13	7	¾	3¾	1⅜	2⅛	2¾	25	964	147.90

With Malleable Thimbles

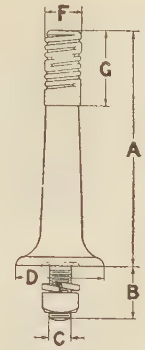
For Cementing into Insulators with 1⅜-Inch Pin Hole

Cat. No.	Dimensions, Inches A	B	C	D	F	G	H	Std. Pkg.	Approx. Wt., Lbs. per 100	Price per 100
4124	6	6½	¾	3	1⅛	2½	2¾	50	390	$100.20
4126	7	6½	¾	3¾	1⅛	2½	2¾	35	450	103.50
4128	8	7	¾	3¾	1⅛	2½	2¾	35	500	107.90
4130	9	7	¾	3¾	1⅛	2½	2¾	25	555	122.90
4132	10	7	¾	3¾	1⅛	2½	2¾	35	610	128.40
4134	11	7	¾	4¾	1⅛	2½	2¾	25	770	137.00
4136	12	7	¾	4¾	1⅛	2½	2¾	25	830	144.50
4138	13	7	¾	4¾	1⅛	2½	2¾	20	989	146.70

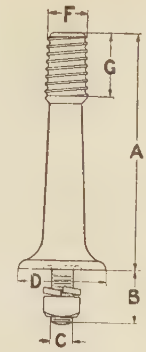
Peirce Forged Steel Pins for Steel Arms

Short Shank

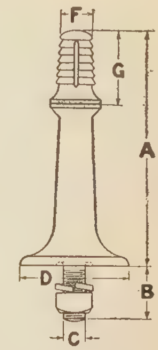
Hot Galvanized



Drawn Separable Thimble Type



Lead Thread Type



Malleable Thimble Type

The separable thimble which is a part of the standard pin is drawn from sheet zinc, and the threads are rolled.

The lead thread pin is made the same as the standard, and in addition is notched and so prepared that when the lead thread is cast, it actually becomes a part of the pin.

The malleable thimble pin is also made similar to the standard pin except that the top is threaded with a standard ¾-inch thread 1⅝-inch long so that it may be used with any separable malleable thimble. Unless otherwise specified, pin is furnished complete with malleable iron thimbles for cementing into insulators with a 1⅜-inch hole.

With Drawn Zinc Separable Thimbles

For Cementing into Insulators with 1-Inch Pin Hole

Stock No.	Dimensions, Inches A	B	C	D	F	G	Std. Pkg.	Approx. Ship. Wt., Lbs. per 100	Price per 100
5603	4	1¾	¾	2½	27/32	2	100	154	$54.00
5607	5	1¾	¾	2½	27/32	2	100	171	56.10
5611	6	1¾	¾	2½	27/32	2	75	204	58.20
For Cementing into Insulators with 1⅜-Inch Pin Hole									
5623	6	1¾	¾	3	1 7/32	2½	50	316	$76.70
5625	7	1¾	¾	3	1 7/32	2½	50	354	79.80
5627	8	1¾	¾	3	1 7/32	2½	40	498	84.10
5629	9	1¾	¾	3½	1 7/32	2½	50	494	99.20
5631	10	1¾	¾	3½	1 7/32	2½	50	554	104.60
5633	11	1¾	¾	3¾	1 7/32	2½	50	616	113.10
5635	12	1¾	¾	3¾	1 7/32	2½	45	540	120.80
5637	13	1¾	¾	3¾	1 7/32	2½	35	748	123.90

With Lead Threads

For Screwing into Insulators with 1-Inch Pin Hole

Stock No.	Dimensions, Inches A	B	C	D	F	G	Std. Pkg.	Approx. Ship. Wt., Lbs. per 100	Price per 100
5703	4	1¾	¾	2½	1	1⅝	100	186	$55.20
5707	5	1¾	¾	2½	1	1⅝	100	118	57.30
5711	6	1¾	¾	2½	1	1⅝	75	212	59.30
For Screwing into Insulators with 1⅜-Inch Pin Hole									
5723	6	1¾	¾	3	1⅜	2⅛	75	382	$83.30
5725	7	1¾	¾	3	1⅜	2⅛	45	413	86.40
5727	8	1¾	¾	3	1⅜	2⅛	35	414	90.60
5729	9	1¾	¾	3½	1⅜	2⅛	50	560	105.10
5731	10	1¾	¾	3½	1⅜	2⅛	50	606	110.30
5733	11	1¾	¾	3¾	1⅜	2⅛	45	703	118.70
5735	12	1¾	¾	3¾	1⅜	2⅛	40	792	125.90
5737	13	1¾	¾	3¾	1⅜	2⅛	35	832	133.20

With Malleable Thimbles

For Cementing into Insulators with 1⅜-Inch Pin Hole

Stock No.	Dimensions, Inches A	B	C	D	F	G	Std. Pkg.	Approx. Ship. Wt., Lbs. per 100	Price per 100
4123	6	1¾	¾	3	1⅛	2½	50	320	$85.20
4125	7	1¾	¾	3¾	1⅛	2½	50	380	88.40
4127	8	1¾	¾	3¾	1⅛	2½	60	422	92.70
4129	9	1¾	¾	3¾	1⅛	2½	35	485	107.90
4131	10	1¾	¾	3¾	1⅛	2½	35	540	113.10
4133	11	1¾	¾	4¾	1⅛	2½	25	700	121.80
4135	12	1¾	¾	4¾	1⅛	2½	25	755	129.40
4137	13	1¾	¾	4¾	1⅛	2½	25	913	132.30

No. 5018 Peirce Lead Thread Thimbles

Malleable Thimble Type

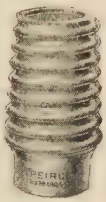
This thimble is made by casting lead threads on the No. 5019 thimble adapter and is used with pins having a standard ¾-inch center bolt or with Peirce No. 4100 series pin.

The lead thread is made to screw directly into an insulator having a 1⅜-inch pin hole.

Cat. No.	For Insulator Pin Hole In.	Hole in Thimble In.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
5018	1⅜	¾	200	130	$32.50

Peirce Lead Thread Separable Thimbles

Drawn Thimble Type



While the cementing of thimbles into the insulators is recommended as being the most dependable method, there are cases, for instance, where wood pins are being replaced with forged steel pins, in which the cost and trouble of cementing the thimbles are too great.

For such conditions standard Peirce drawn zinc thimbles are furnished with lead threads cast on them, so that insulators can be screwed on the thimbles mounted on the pins instead of having the thimbles cemented into the insulators and then screwed on the pins. These thimbles may be used on No. 5600 series forged steel pins, high voltage clamp pins, and pole top pins.

Cat. No.	For Insulator Pin Hole, In.	Size of Thimble, In.	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
5020	1	27/32	500	24	$20.90
5025	1⅜	1 7/32	250	47	25.00

No. 5019 Peirce Thimble Adapters

Hot Galvanized

Provides a method for using insulators, in which Peirce Drawn Thimbles are cemented, on old lines equipped with cast iron separable thimbles.

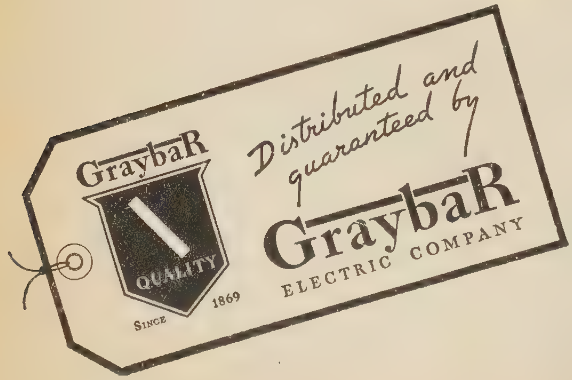
Cat. No.	Dimen., In. Outside Thread	Dimen., In. Inside Thread	Dimen., In. Height	Ship. Wt., Lbs. per 100	Price per 100
5019	1 7/32	¾	3	56	$20.90

Peirce Presteel Centering Washers

Hot Galvanized

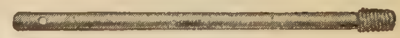
Used on the lower end of Peirce Forged Steel Pins to center the pin when used on arms bored for wood pins.

Cat. No.	To Fit Hole Inches	Pin Hole Inches	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
5030	1¼	13/16	500	28	$9.30
5031	1¼	1 1/16	500	27	9.30
5032	1½	13/16	500	31	9.30
5033	1½	1 1/16	500	29	9.30



Peirce Solid Steel Pole Top Pins

Hot Galvanized



No. 3120

This type of pole top pin is made of a solid bar of special stiff steel. The two bolt holes at right angles permit the lining up of the wire groove of the insulator.

Lead Thread

For 1⅜-Inch Insulator Pin Hole

Cat. No.	Dimensions Inches: Spacing of Through and Eye Bolt	Diam.	Length Over All	Std. Pkg.	Weight Pounds per 100	Price per 100
3120	8	1	20	10	610	$93.90
3124	8	1	24	15	647	110.60
3125	8	1⅛	24	10	850	138.60
3131	10	1⅛	30	10	1070	153.90
3137	10	1⅛	36	10	1290	183.90
Separable Zinc Thimble — For Cementing Into 1⅜-Inch Insulator Pin Hole						
3220	8	1	20	10	460	$93.90
3224	8	1	24	10	550	110.60
3225	8	1⅛	24	10	690	138.60
3231	10	1⅛	30	10	870	153.90
3237	10	1⅛	36	10	1050	183.90
***Malleable Iron Thimble — For Cementing Into 1⅜-Inch Insulator Pin Hole**						
3420	8	1	20	10	470	$98.10
3424	8	1	24	10	560	114.80
3425	8	1⅛	24	10	700	144.70
3431	10	1⅛	30	10	880	158.10
3437	10	1⅛	36	10	1060	188.00

Eye Bolts

No. 3151

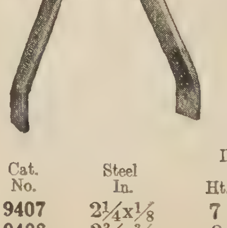
No. 4151

Curved Shoulder Type	Broad Washer Type	Length to Center of Eye Inches	Diameter Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
For 1-Inch Pin						
3149	4149	10	⅝	50	129	$28.40
3151	4151	12	⅝	50	145	31.70
3153	4153	14	⅝	50	161	35.40
For 1⅛-Inch Pin						
3150	4150	10	⅝	50	129	$28.40
3152	4152	12	⅝	50	149	31.70
3154	4154	14	⅝	50	161	35.40

*Unless otherwise specified, pins come complete with Thimble No. 5021. Adapter may be used.

Hubbard Ridge Irons

Hot Galvanized



Fastened to pole by four ½-inch lag screws, holes staggered to prevent splitting pole top.

Pins not included in prices.

Cat. No.	Steel In.	Dimens., Inches: Ht.	Pole	Pin Hole	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9407	2¼x⅛	7	6	9/16	10	140	$42.50
9408	2¾x3/16	8	7	11/16	5	280	66.80
9409	2¾x¼	8¼	7	13/16	5	450	81.80
9410	3 x¼	18½	7	13/16	5	888	155.85

Peirce Presteel Pole Top Pins

Hot Galvanized

No. 3048

Peirce Presteel Pins are made from No. 9 gauge sheet steel, which gives the maximum strength for a given weight.

Mounting holes are 11/16-inch.

Spring Thread Type

Cat. No.	Length Overall Inches	Hole Spacing Inches	Diam. of Thread Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
3040	18	8	1	5	300	$72.20
3045	24	8	1	5	380	98.40
Lead Thread Type						
3034	18	8	1	50	340	$72.20
3039	18	8	1 3/8	50	402	88.80
3044	24	8	1	7	500	98.40
3049	24	8	1 3/8	6	650	115.00
Separable Zinc Thimble Type						
3042	18	8	27/32	10	275	$86.70
3043	18	8	17/32	5	320	86.70
3047	24	8	27/32	5	360	112.50
3048	24	8	17/32	10	406	112.50

Peirce Pipe Pole Top Pins

For 1 3/8-Inch Pin Hole

For the higher voltage lines the extra heavy pipe pins are in general use, because of their strength and light weight.

Mounting holes are 11/16-inch.

With Separable Zinc Thimble

Cat. No.	Size of Pipe Inches	Length Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
3060	1 1/4	18	5	340	$96.50
3061	1 1/2	18	10	340	149.20
3063	1 1/2	24	5	700	178.40
3065	1 1/2	28	10	655	208.40
3066	2	28	2	1200	255.90
3067	1 1/2	32	10	745	220.80
3068	2	32	10	995	294.90
3069	2	36	10	1115	334.10
Lead Thread					
3070	1 1/4	18	10	415	$96.50
3071	1 1/2	18	10	457	137.20
3073	1 1/2	24	5	520	178.40
3075	1 1/2	28	10	710	239.40
3076	2	28	10	929	309.00
3077	1 1/2	32	10	800	220.80
3078	2	32	2	1500	325.80
3079	2	36	2	1700	365.00
***Malleable Thimble**					
3080	1 1/4	18	10	220	$104.70
3081	1 1/2	18	10	340	157.40
3083	1 1/2	24	10	703	186.50
3085	1 1/2	28	10	823	216.60
3086	2	28	10	1098	264.30
3087	1 1/2	32	10	945	228.90
3088	2	32	10	1265	303.30
3089	2	36	10	1433	342.30

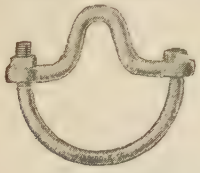
No. 3079

*Unless otherwise specified, pins come complete with thimble No. 5021. Adapters may be used.

Hubbard Strain Insulator Clevises

Hewlett Suspension Type

Hot Galvanized

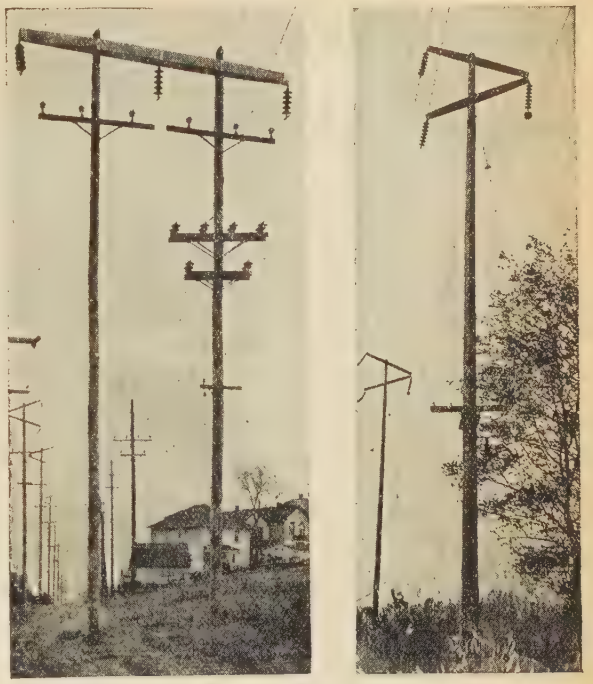


This clevis is made from 1/2-inch round steel with drop-forged eyes that accommodate the 3/8-inch curved clevis bolt.

Fits the 6, 7 1/2 and 10-inch Hewlett Insulators. Ultimate strength, 5000 pounds. Should be used only for light strains.

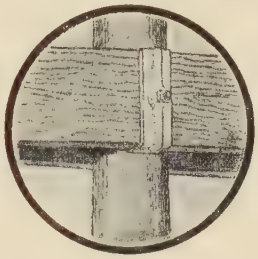
Cat. No.	Dimensions, Inches: Diam. Clevis	Diam. Clevis Bolt	Length Inside	Width Inside	Width Eye	Std. Pkg.	Weight Pounds per 100	Price per 100
895	1/2	3/8	1 15/16	3 9/32	1 1/8	200	68	$40.00

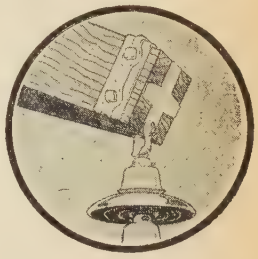
Hubbard High Tension Crossarm Hardware Fittings

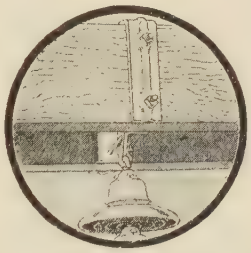


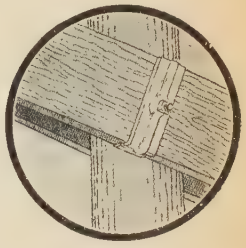
High Tension Crossarm Hardware Fittings for double-plank H-frame and wishbone crossarm construction are obtainable to meet various specifications.

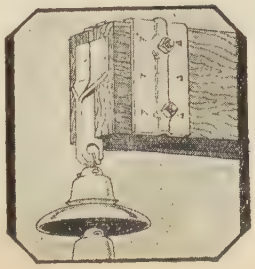
Inquiries and designs for estimates are invited.

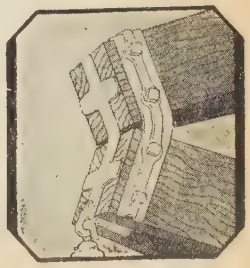






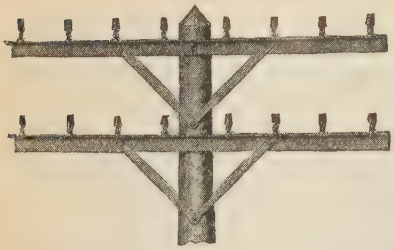






Hubbard Angle Steel Cross Arms

Hot Galvanized



Steel arms of a given cross section are uniform in strength, and when protected by hot-dip galvanizing, their strength remains uniform throughout the life of the zinc coating, probably thirty years.

Unless otherwise specified, holes will be of the following sizes: for through bolts, 11/16 inch; for brace bolts, 7/16 inch for flat braces and 9/16 inch for angle braces; and for pins, 13/16 inch.

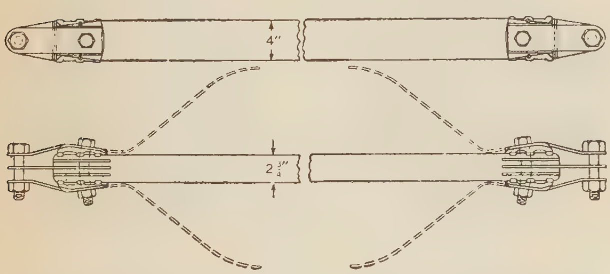
Quotations on special arms will be given promptly.

Telephone Arms

Cat. No.	No. of Pins	Lgth. In.	Punched for Brace No.	Pin Spacing, In. Pole Pins	Pin Spacing, In. Side Pins	Size Angle Inches	Ship. Wt., Lbs. Each	Price Each
7602	2	20	8020	16	..	3 x2 x3/16	5¼	.....
7604	4	40	8020	16	10	3 x2 x3/16	10¼	.....
7606	6	60	8022	16	10	3 x3 x¼	24½	.....
7608	8	80	8030	16	10	3 x3 x¼	32¾	.....
7610	10	100	8032	16	10	3 x3 x¼	41	.....
Electric Light Arms—N. E. L. A. Standard Spacing								
7612	2	36	8120	30	....	3 x3 x¼	14¾	.....
7614	4	65	8126	30	14½	3 x3 x¼	26½	.....
7616	6	94	7940	30	14½	3½x3½x5/16	56½	.....
7620	8	117¾	7941	30	13⅝	3½x3½x5/16	70⅔	.....
Power Transmission Arms								
7622	2	28	8120	24	..	3 x3 x¼	11⅔	.....
7632	2	40	8120	36	..	3 x3 x¼	16⅔	.....
7642	2	52	8120	48	..	3 x3 x¼	21⅞	.....
7672	2	80	7940	74	..	3½x3½x5/16	48	.....
7624	4	76	7950	24	24	3 x3 x¼	31⅔	.....
7634	4	116	7942	38	36	3½x3½x5/16	69½	.....

Hubbard-OB Wood Strain Insulators

Metal Parts Hot Galvanized



Wood strain insulators with special yokes, straps, wedge plates, friction plates and arcing horns, provide permanently tight mechanical guys and electrically correct insulators for the structure. Qualifications of Hubbard-OB Wood Strain Insulators are:

The wood fibres are in compression, not in shear with the grain of the wood.

The self-tightening wedge grip automatically maintains the original ultimate strength of the assembly even though the wood shrinks.

The constantly tight connection between end casting and wood surface reduces electrical resistance at point of contact and prevents burning.

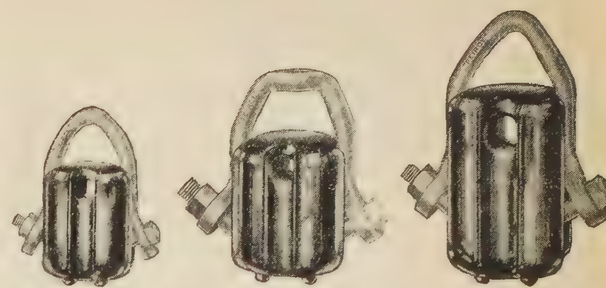
Arcing horns provide a discharge gap for passing of excess voltages without shattering the wood.

Pole band attachments are obtainable for mounting insulators close to the pole and save the use of two clamps and a length of strand.

Cat. No.	6-Foot Length Clear Wood Per 100	Std. Pkg.	Wt., Lbs. per 100	9-Foot Length Clear Wood Per 100	Std. Pkg.	Wt., Lbs. per 100	Ult. Tension Lbs.
30594	......	..	4700	......	..	5500	7000
30478	......	..	5000	......	..	5800	12000
29647	......	..	5300	......	..	6100	24000
30783	......	..	6900	......	..	8500	36000

Peirce Strain Insulators

Standard Type—Dry Process



No. 502 **No. 504** **No. 506**

The Peirce Standard Type Strain Insulators are made in accordance with the specifications of the National Electric Light Association.

They are produced from the highest grade of dry process porcelain and are designed so that all sharp corners and edges have been eliminated.

An exclusive feature of the Peirce Strain Insulator is the radius of the wire groove, which is so designed that it gives a maximum bearing surface on the clevis bolt and may be used equally as well with guy strand or insulated wire.

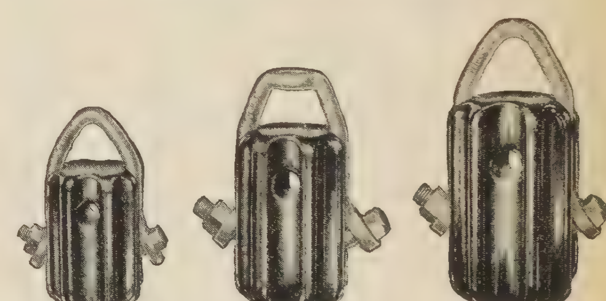
Peirce Dry Process Insulators are ordinarily used for dead-ending secondary circuits and for guying.

No. 502 is used with clevis No. 805, light type, No. 825, heavy type or No. 845, eye type. No. 504 is used with clevis No. 807, light type, No. 827, heavy type or No. 847, eye type. No. 506 is used with No. 811, light type, No. 831, heavy type or No. 851, eye type.

Cat. No.	Diameter, Inches Hole	Over All	Over Groove	Std. Pkg.	Weight Pounds per 100	Price per 100
502	9/16	2⅝	1⅞	50	101	**$23.40**
504	9/16	2⅞	2⅛	50	148	**27.50**
506	13/16	3⅜	2⅜	25	276	**55.00**

Peirce Strain Insulators

Multi-Fin Type—Wet Process



No. 512 **No. 514** **No. 516**

For dead-ending primary circuits and guying of high tension lines Peirce Multi-Fin Strain Insulators possess every feature required for dependable, continuous service.

They are made from thoroughly vitrified wet process porcelain and are designed with rugged fins and well rounded edges, which eliminate the possibility of chipping due to rough handling or abuse after installation.

The radius of the wire groove is so designed that it gives a maximum bearing surface on the clevis bolt and may be used equally as well with guy strand or insulated wire.

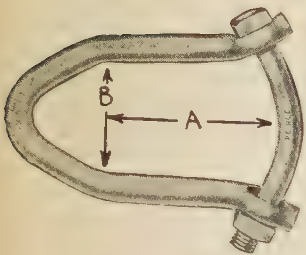
No. 512 is used with clevis No. 805, light type, No. 825, heavy type or No. 845, eye type. No. 514 is used with clevis No. 807, light type, No. 827, heavy type or No. 847, eye type. No. 516 is used with clevis No. 811, light type, No. 831, heavy type or No. 851 eye type.

Cat. No.	Diameter, Inches Hole	Over All	Over Groove	Line Voltage	Std. Pkg.	Weight Pounds per 100	Price per 100
512	⅝	2 11/16	1⅞	2200	50	152	**$30.00**
514	¾	3 3/16	2⅛	4400	25	258	**61.50**
516	⅞	3⅝	2⅜	6600	20	504	**83.30**

Hubbard Strain Insulator Clevises

Hot Galvanized

Light Type



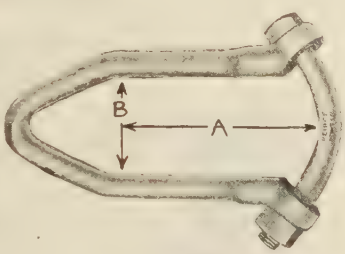
No. 803

The light type clevis is drop-forged from 7/16-inch diameter open hearth steel. Has an ultimate strength of 8000 pounds and is equipped with a 3/8-inch bolt. An eye 1-inch inside diameter is required to accommodate this clevis.

Cat. No.	Dimen., In. A	B	Approx. Ship. Wt., Lbs. per 100	Price per 100	Cat. No.	Dimen., In. A	B	Approx. Ship. Wt., Lbs. per 100	Price per 100
801	3	1½	67	$25.50	807	3	2¼	73	$25.00
802	4	1½	76	27.60	808	4	2¼	84	28.60
803	3	1¾	71	25.80	809	5	2¼	109	30.30
804	4	1¾	86	27.60	810	3	2½	77	27.30
805	3	2	74	26.20	811	4	2½	107	30.80
806	4	2	93	28.00	812	5	2½	93	30.80

Heavy Type

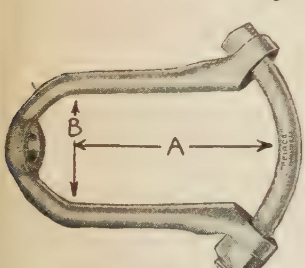
The heavy type clevis is drop-forged from ½-inch diameter open hearth steel. Has an ultimate strength of 13000 pounds and is equipped with a ½-inch bolt. An eye 1½-inch inside diameter is required to accommodate this clevis.



No. 823

Cat. No.	Dimen., In. A	B	Approx. Ship. Wt., Lbs. per 100	Price per 100	Cat. No.	Dimen., In. A	B	Approx. Ship. Wt., Lbs. per 100	Price per 100
821	3	1½	109	$32.50	828	4	2¼	136	$35.90
822	4	1½	124	35.10	828½	4½	2¼	126	36.30
823	3	1¾	117	32.50	829	5	2¼	145	36.70
824	4	1¾	127	43.70	830	3	2½	128	42.50
825	3	2	109	33.30	831	4	2½	138	36.30
826	4	2	133	35.10	831½	4½	2½	131	36.60
827	3	2¼	120	32.50	832	5	2½	146	37.50

Eye Type



No. 843

The eye type clevis is similar to the heavy type, except that it has a drop-forged eye in the crotch of the clevis which is provided with an 11/16-inch hole. This hole permits the clevis to be attached to the head end of a through bolt, nut end of a through bolt, double arming bolt, eye bolt, or double arming eye bolt.

Cat. No.	Dimen., In. A	B	Approx. Ship. Wt., Lbs. per 100	Price per 100	Cat. No.	Dimen., In. A	B	Approx. Ship. Wt., Lbs. per 100	Price per 100
841	3	1½	124	$48.30	848	4	2¼	136	$51.60
842	4	1½	139	53.30	848½	4½	2¼	141	60.00
843	3	1¾	124	49.10	849	5	2¼	142	60.60
844	4	1¾	137	54.00	850	3	2½	128	52.00
845	3	2	129	50.00	851	4	2½	144	50.10
846	4	2	128	54.90	851½	4½	2½	144	61.20
847	3	2¼	132	50.70	852	5	2½	154	61.90

Hubbard Strain Insulator Clevises

Barmack Drop-Forged Type (Patented)

Hot Galvanized

Designed for dead-ending or anchoring lines.

It is furnished complete with a 3/8x2-inch machine bolt, pipe spacer, lock washer and 3/8-inch curved machine bolt.

Cat. No.	Inside Lgth. In.	Inside Wdth. In.	Std. Pkg	Wt. Lbs. per 100	Price per 100
861	3	1½	125	94	$33.50
863	5	1½	100	111	41.70
867	3	2½	125	95	37.20
869	5	2½	100	115	45.40

Hubbard Strain Insulator Clevises

Drop-Forged Double Type

Hot Galvanized

With this type of clevis two strain insulators can be assembled in a series.

The light type is made from 7/16-inch round steel and equipped with 3/8-inch curved bolts.

The heavy type is drop-forged from ½-inch diameter open hearth steel. It is equipped with ½-inch bolt.

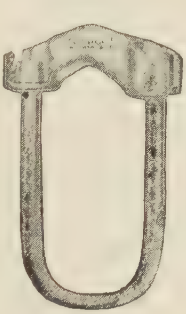
Light Type

Cat. No.	Inside Length Inches	Inside Width Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
881	8	1½	100	124	$41.70
882	8	2	100	126	43.40
883	8	2½	100	128	45.00
884	10	1½	100	141	48.30
885	10	2	85	143	50.70
886	10	2½	75	148	63.30
887	12	1½	50	160	61.90
888	12	2	50	166	63.80
889	12	2½	50	170	66.70

Heavy Type

Cat. No.	Inside Length Inches	Inside Width Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
781	8	1½	100	135	$58.30
782	8	2	100	144	58.30
783	8	2½	100	153	58.30
784	10	1½	100	153	63.30
785	10	2	100	162	63.30
786	10	2½	100	171	63.30
787	12	1½	100	173	66.60
788	12	2	100	182	66.60
789	12	2½	100	191	66.60

No. 885



Hubbard Strain Insulator Clevises

Copper Bale Single Type

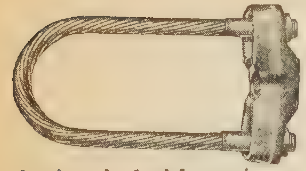
Hot Galvanized

Has a bale made of soft metal (copper) to equalize the strains over the entire bearing surface of the insulator.

The drop-forged yoke may be used through the eye of a standard 5/8-inch eye bolt, No. 7502 eye nut or No. 7515 Bolt Eye. The head of the copper bale is ¾-inch diameter. Ultimate strength, 8000 pounds.

Cat. No.	Inside Length Inches	Inside Width Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
1535	5⅜	2¾	150	97	$80.80

Hubbard Flexible Bail Strain Insulator Clevises



This clevis develops the maximum strength of porcelain strain insulators by means of the form-fitting bail which eliminates concentrated stresses. Can be used with eyebolts, machine and double-arming bolts and also interlocked for series combination.

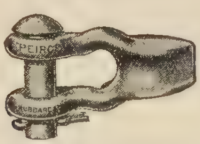
Clevis has galvanized drop-forged universal mounting yoke and 7/16-inch flexible strand bail with 1/2-inch diameter threaded steel studs. Bail is galvanized steel strand or copperweld strand and can be set at 2¼ and 3-inch spacing. Inside width of bail loops, 1¾ to 2½ inches. Hexagon nuts are trapped in the yoke.

Length Inside Loop Inches	Galvanized Bail Cat. No.	Galvanized Bail Per 100	Copperweld Bail Cat. No.	Copperweld Bail Per 100	Std. Pkg.	Weight Pounds per 100
*4	1552	$59.10	1562	$74.10	75	145
*4¾	1554	59.10	1564	77.10	75	150
*5½	1556	59.10	1566	81.60	75	155

*Sizes vary according to insulator used and nut-setting.

Peirce Thimble Clevises

Hot Galvanized

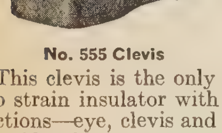


Peirce Thimble Clevises dead-end lines ¾ inch or under to suspension insulators. Both clevises are developed from the same size of drop-forging and have a minimum radius of ⅝ inch.

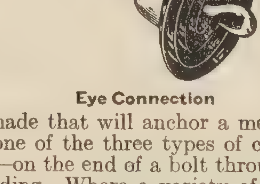
Cat. No.	Per 100	Diameter Bolt Inches	Ultimate Strength Pounds	Std. Pkg.	Wt. Lbs. per 100
654	$22.20	½	15000	150	105
655	25.80	⅝	20000	150	111

Klauber Universal Dead Ending Clevises

Hot Galvanized



No. 555 Clevis



Eye Connection

This clevis is the only one made that will anchor a metal cap strain insulator with any one of the three types of connections—eye, clevis and hook—on the end of a bolt through the side of a cross arm or building. Where a variety of insulators are used, the universal clevis is a necessity. Forged from flat steel 3/16x1½ in., and fits both ½ and ⅝-inch bolts.

Weight, 87 pounds per hundred.

Price, No. 555 Clevises.................... per 100 $25.00

Peirce Cross Arm Clevises

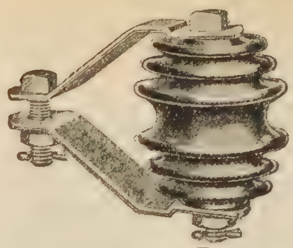
Hot Galvanized

For dead ending wires on wood arms.

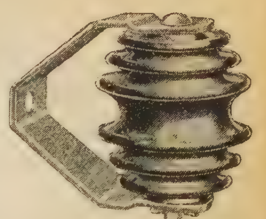
Cat. No.	Size Arm Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
549	3¼x4¼	100	160	$43.40
550	3½x4½	100	160	50.10
551	3¾x4¾	100	160	52.20
552	4 x5	100	160	54.30

Peirce Corner and Dead End Clevises

Hot Galvanized



No. 1330, Open Type



No. 1344, Closed Type

Strong, durable and efficient fixtures for corner attachment and dead-end services on medium voltage lines. Also adaptable to series street lighting circuits. For pole and crossarm installation. The insulator is wet process, having a high flashover rating.

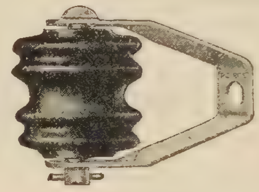
Open type is equipped with ⅝-inch insulator and fastening bolts; closed type has ⅝-inch insulator, bolt and 11/16-inch hole for fastening bolt.

Cat. No.	Per 100	Material Size Steel Inches	Clevis Wet Flashover Volts	Mechanical Strength Lbs.	Std. Pkg.	Wt. Lbs. per 100
1330	$108.30	¼x1½	10000	5500	30	580
1344	108.30	¼x1½	8000	4500	30	530

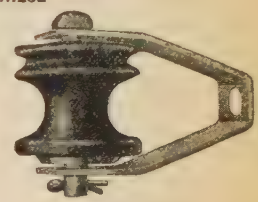
Peirce Insulated Clevises

With Wet and Dry Process Insulators

Hot Galvanized



No. 1340

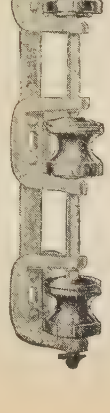


No. 1342

For primary and secondary lines. Nos. 1339 and 1340 have wet process insulators for use on primary circuits up to 4000 and 6000 volts, respectively. Nos. 1341 and 1342 have dry process insulators for use on secondary lines.

Clevis yokes for all clevises are No. 11 gauge by 1½-inch steel, have 11/16-inch mounting holes; equipped with ⅝-inch cotter bolts and brass cotters.

Cat. No.	Per 100	Style of Insulator	Length to Center of Bolt, In.	Std. Pkg.	Wt. Lbs. per 100
1339	$38.50	No. 1608	4 3/16	125	132
1340	48.60	No. 1609	4 13/16	25	288
1341	32.10	No. 1606	4 3/16	125	119
1342	42.00	No. 355	4 13/16	25	276



Peirce Secondary Racks

Chicago Type

Hot Galvanized

Chicago type racks consist of presteel U-shaped points made of No. 12 gauge steel securely riveted to a ¼x1¼-inch flat steel back. The insulators are attached to the rack with a ⅝-inch button head bolt. Pole mounting holes are 11/16x1-inch for use with either ⅝-inch through bolts or lag screws. No. 355 insulators are standard equipment. Nos. 356, 455, 456 and 465 insulators can be used.

Cat. No..	No. of Line Wires	Dimen., In. Wire Spacing	Dimen., In. Over All Length	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
248	2	8	12½	10	587	$118.20
344	3	4	12½	10	687	126.60
348	3	8	20½	5	900	178.20
448	4	8	28½	5	1240	238.10
544	5	4	20½	5	1110	194.80

Peirce Heavy Presteel Secondary Racks

Hot Galvanized

No. 278

Of sufficient weight and strength for general secondary work; however, for long spans and cable construction Standard Pierce Racks are recommended.

Made of a presteel channel back; presteel channel U-shaped points inserted through and riveted to the back, and a ⅝-inch through rod for attaching No. 355 insulators to points.

The Nos. 278, 374, 378 and 478 are furnished with straps so that they may be used on buildings for making heavy service connections. When used on poles, the straps should be hammered flat against the pole, increasing the bearing surface. The Nos. 1278, 1374, 1378 and 1478 may be used in connection with Peirce Rack Bands for attaching the racks to tubular steel poles.

Cat. No.	No. of Line Wires	Dimensions, Inches: Wire Spacing	Dimensions, Inches: Length Over All	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
278	2	8, with Straps	16½	10	660	$118.40
374	3	4, with Straps	16½	10	654	130.80
378	3	8, with Straps	24½	10	1000	194.20
478	4	8, with Straps	32½	10	1172	256.70
1278	2	8, without Straps	16½	10	600	109.20
1374	3	4, without Straps	16½	10	614	121.70
1378	3	8, without Straps	24½	10	910	181.70
1478	4	8, without Straps	32½	10	1250	232.70

Peirce Light Presteel Secondary Racks

Hot Galvanized

These racks were designed for light secondary work. They are especially adaptable, on account of their strength and low cost, for running extensions from secondary mains; for lines where future development is limited; and for house service connections.

The light presteel racks have a presteel channel back 1½x1³⁄₁₆-inch; No. 12 gauge channel U-shaped points, which are inserted through and riveted to the back, and a ½-inch insulator bolt for attaching the No. 1606 insulators to the points.

When 4-inch spacing racks are specified, a shield for attaching over the upper edges of the points, is furnished to prevent injury to the insulation when stringing the wire.

No. 276

Cat. No.	No. of Line Wires	Dimensions, Inches: Wire Spacing	Dimensions, Inches: Length Over All	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
276	2	6, with Straps	13¼	10	374	$83.20
376	3	6, with Straps	19¼	10	570	116.70
476	4	6, with Straps	25¼	10	740	135.00
1276	2	6, without Straps	13¼	10	320	75.00
1376	3	6, without Straps	19¼	10	480	108.30
1476	4	6, without Straps	25¼	10	594	127.50
2768	2	8, without Straps	16½	10	360	81.70
3768	3	8, without Straps	24½	10	550	116.40

Peirce Light Presteel House Racks

Hot Galvanized

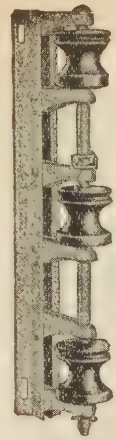
For use as house brackets. Sometimes used for carrying secondary wires vertically on the poles where the wire is lighter than No. 3 wire. Made with ¾-inch channel back and presteel points. Mounting slots are 7⁄16x½-inch, both in the back and straps. Insulator through bolt is ⅜-inch diameter. Racks assembled with No. 1603 insulator.

Cat. No.	No. of Line Wires	Wire Spacing Inches	Length Over All Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
183	1	0	6⅜	20	275	$33.30
286	2	6	12⅜	25	324	72.30
383	3	3	12⅜	25	388	84.90
386	3	6	18⅜	15	473	106.70
583	5	3	18⅜	25	460	139.20
501	Corner Iron	.	....	275	43	13.40
1603	Insulator	.	....	100	45	7.40

Peirce Secondary Racks

Hot Galvanized

Standard Type



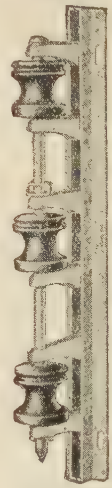
No. 358

Strong enough for the heaviest work, with an ample factor of safety. Equipped with No. 355 insulators, although Nos. 356, 455 and 456 insulators can be furnished if desired. The insulators are packed in corrugated paper boxes and the racks are wired in bundles of ten.

The width of the back of the rack is 2¾ inches with a slot ¾ inch wide between the two angles, which allows the use of ⅝-inch through or lag bolts for fastening the rack to the pole.

Cat. No.	No. of Line Wires	Dimen., In. Wire Spacing	Dimen., In. Length Over All	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
250	2	4	9½	10	578	$95.00
258	2	8	13½	10	588	140.80
350	3	4	13½	10	860	153.30
358	3	8	21½	5	1160	209.20
450	4	4	17½	5	1000	187.80
458	4	8	29½	5	1420	295.80
540	5	4	21½	5	1360	233.30
3058	3	8	13½	5	760	161.70

Extended Back Type



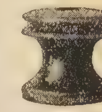
No. 1358

Similar in all respects to the standard rack except that the angles forming the back are extended to accommodate through bolts for attaching the rack. Some construction men like this feature as the insulators can be assembled on the rack in the storeroom and attached to the pole without removing them.

Cat. No.	No. of Line Wires	Dimen., In. Wires Spacing	Dimen., In. Length Over All	Std. Pkg.	Ship. Wt., Lbs. per 100	Price per 100
1250	2	4	13⁹⁄₁₆	10	620	$95.00
1258	2	8	17⁹⁄₁₆	10	740	140.80
1350	3	4	17⁹⁄₁₆	10	840	153.30
1358	3	8	25⁹⁄₁₆	5	1220	209.20
1450	4	4	21⁹⁄₁₆	5	1060	187.80
1458	4	8	33⁹⁄₁₆	5	1460	295.80
1540	5	4	25⁹⁄₁₆	5	1420	233.30
3158	3	8	17⁹⁄₁₆	5	1300	161.70

Insulators for Peirce Secondary Racks

Standard Type



No. 355

No. 355 brown glazed insulator is the most popular secondary rack insulator and is furnished on all heavy type racks unless otherwise specified. For marking the neutral wire of a secondary circuit, some construction men use the No. 355 white glazed insulator.

Where high mechanical strength is required, such as for dead-ending heavy lines, the No. 455 is used by many companies.

Cat. No.	Color of Glaze	Kind of Porcelain	Ship. Wt., Lbs. per 100	Price per 100
355	Brown or White	Dry Process	100	$12.60
455	Brown	Wet Process	100	17.40

Double Groove Type

No. 356

Has 2 grooves, one for tying in the main circuit and the other for the service wires.

356	Brown	Dry Process	102	$18.30
456	Brown	Wet Process	102	20.90

No. 1606 Light Rack Type

No. 1606

Insulators for the light racks are furnished with either brown or white glaze, both of which are made of dry process porcelain. The brown glazed insulator is also used on the No. 1341 clevis, on spreader racks, light racks, and on sister hook and tree fixtures.

1606	Brown	Dry Process	40	$8.60
1606	White	Dry Process	40	8.60

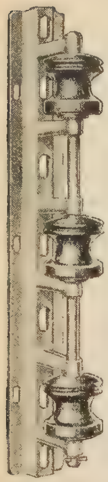
No. 1603 House Rack Type

No. 1603

Used with house racks. Also used on the No. 2925 swinging knob fixture.

1603	Brown	Dry Process	45	$7.40

Peirce Electroweld Secondary Racks



No. 3848 Extended Back

Hot Galvanized

Heavy Service Type

The heavy service type rack has uniform strength to resist all strains—dead-end, side pull and dead load.

No sharp edges, rivets, no pockets nor lapping joints to hold moisture.

Wide extended or non-extended backs for pole and building.

Equipped with No. 355 insulator.

The back bearing surface is 3⅛ inches.

No. 3838 Non-Extended Back

No. of Line Wires	Wire Spacing In.	Std. Pkg.	Extended Back Cat. No.	Extended Back Per 100	Extended Back Over All Lgth. In.	Extended Back Wt. Lbs. per 100	Non-Extended Back Cat. No.	Non-Extended Back Per 100	Non-Extended Back Over All Lgth. In.	Non-Extended Back Wt. Lbs. per 100
2	4	10	**2844**	**$95.00**	13¼	542	**2834**	**$95.00**	9¾	492
2	6	10	**2846**	**118.20**	15¼	713	**2836**	**118.20**	11¾	663
2	8	10	**2848**	**140.80**	17¼	764	**2838**	**140.80**	13¾	714
3	4	10	**3844**	**153.30**	17¼	896	**3834**	**153.30**	13¾	846
3	6	5	**3846**	**202.50**	21¼	1049	**3836**	**202.50**	17¾	999
3	8	5	**3848**	**209.20**	25¼	1154	**3838**	**209.20**	21¾	1104
4	4	5	**4844**	**187.80**	21¼	1156	**4834**	**187.80**	17¾	1106
4	6	5	**4846**	**286.50**	27¼	1448	**4836**	**286.50**	23¾	1398
4	8	5	**4848**	**295.80**	33¼	1543	**4838**	**295.80**	29¾	1447

Medium Service Type

The same spacing of the mounting holes permits installing of the medium and heavy service type racks back to back. Equipped with No. 355 insulator. Back bearing surface, 2¾ inches.

No. of Line Wires	Wire Spacing In.	Std. Pkg.	Extended Back Cat. No.	Extended Back Per 100	Extended Back Over All Lgth. In.	Extended Back Wt. Lbs. per 100	Non-Extended Back Cat. No.	Non-Extended Back Per 100	Non-Extended Back Over All Lgth. In.	Non-Extended Back Wt. Lbs. per 100
2	4	5	**2644**	**$84.30**	13¼	525	**2634**	**$73.50**	9¾	485
2	6	5	**2646**	**125.40**	15¼	593	**2636**	**114.60**	11¾	553
2	8	5	**2648**	**118.40**	17¼	526	**2638**	**107.40**	13¾	486
3	4	5	**3644**	**130.80**	17¼	654	**3634**	**119.90**	13¾	614
3	6	5	**3646**	**186.50**	21¼	791	**3636**	**177.30**	17¾	751
3	8	5	**3648**	**194.20**	25¼	879	**3638**	**183.30**	21¾	839
4	4	5	**4644**	**168.60**	21¼	925	**4634**	**157.80**	17¾	885
4	6	5	**4646**	**247.50**	27¼	1037	**4636**	**239.10**	23¾	997
4	8	5	**4648**	**256.70**	33¼	1172	**4638**	**245.60**	29¾	1132

Light Service Type

Especially adapted for running extensions from secondary mains, for lines where future development is limited and for house service connections.

No. 3746

Made in extended back type only.

The mounting holes on these racks are exactly the same spacing as the heavy service type. This feature permits installing a light service and heavy service rack back to back on a pole using the same through bolt. Equipped with No. 1606 insulators. Back bearing surface, 2¾ inches.

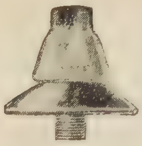
Cat. No.	Per 100	No. Line Wires	Wire Spacing In.	Over All Lgth. In.	Std. Pkg.	Wt. Lbs. per 100
2744	**$75.00**	2	4	13¼	10	322
2746	**83.20**	2	6	15¼	10	362
2748	**88.40**	2	8	17¼	10	394
3744	**111.50**	3	4	17¼	10	479
3746	**116.70**	3	6	21¼	10	598
3748	**126.30**	3	8	25¼	5	616
4744	**148.00**	4	4	21¼	5	621
4746	**135.00**	4	6	27¼	5	708
4748	**164.30**	4	8	33¼	5	742

Prices shown include insulators.

Hubbard Insulated Lamp Hanging Attachments

Hot Galvanized

Suspension Insulator Type

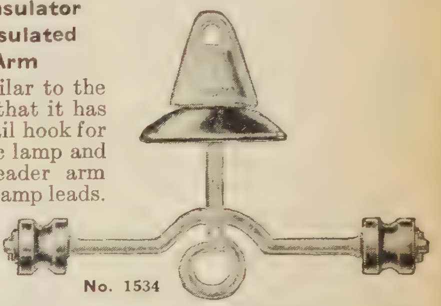


No. 1504 is a metal cap suspension insulator and has a safety hook for an arc lamp. The No. 1514 is similar to No. 1504, except that it has a metal cap tapped for ¾-inch pipe thread for screwing to the mast arm stud and a pig tail hook for supporting the arc lamp. The No. 1524 is similar to the No. 1514 except that it has a ¾-inch pipe thread stud instead of a pig tail hook for fastening the arc lamp.

Cat. No.	Overall Length Inches	Working Voltage	Std. Pkg.	Weight Pounds per 100	Price per 100
1504	6¾	6600	50	330	**$520.00**
1514	7⅝	6600	50	330	**520.00**
1524	5$\frac{1}{16}$	6600	50	295	**520.00**

Suspension Insulator Type with Insulated Spreader Arm

No. 1534 is similar to the No. 1504, except that it has an extended pig tail hook for supporting the arc lamp and an insulated spreader arm for attaching the lamp leads.



No. 1534

Cat. No.	Wire Spacing, Inches	Working Voltage	Std. Pkg.	Weight Pounds per 100	Price per 100
1534	12	6600	25	525	**$720.00**

Insulated Lamp Hanger Type

No. 1591

The No. 1591 consists of a special 6600 volt pin type insulator, a cap for attaching to the mast arm and a stud for attaching the lamp. Both stud and cap are threaded with standard ¾-inch pipe threads. No. 1592 is similar to No. 1591 except that the pig tail hook is cemented into insulator instead of stud.

1591	6½	6600	50	324	**$300.00**
1592	8¾	6600	50	336	**300.00**

Peirce Spreader Brackets

Hot Galvanized

No. 217

Used where great strength is needed.

These brackets are pressed to shape from No. 9 gauge open hearth steel and are equipped with Peirce 1-inch spring threads which prevent insulator breakage.

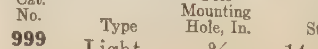
Standard package, 10.

Cat. No.	Wiring Spacing Inches	Wt., Lbs. per 100	Price per 100
217	13	300	**$105.00**
317	6½	350	**147.60**

No. 317

Peirce Dead-Ending Straps

For Secondary Racks

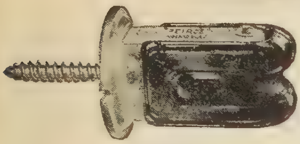


Hot Galvanized

Used to temporarily dead-end a line. Provided with a $\frac{9}{16}$-inch hole for ½-inch lag screw.

Cat. No.	Type	Pole Mounting Hole, In.	Size of Steel, In.	Ship. Wt., Lbs. per 100	Price per 100
999	Light	$\frac{9}{16}$	14-ga.x1¼	39	**$14.20**
1000	Heavy	$\frac{9}{16}$	¼x1¼	100	**15.90**

Peirce Wireholders
Standard Type
Hot Galvanized

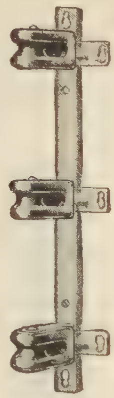

No. 190

No. 1190

No. 191-A

No. 191

No. 296


No.396

The standard type of wireholders have been designed on scientific principles, namely, metal parts in tension and porcelain in compression each developing its greatest strength. The No. 1602 insulator used on these wireholders is designed with well rounded edges almost entirely eliminating chipping or breakage and it is secured to the bracket by a complete band of metal.

This wireholder is not affected by temperature changes or by the difference in the coefficient of expansion of its various parts.

The No. 190 wireholder is in use for making house service connections and when in use the brass cotter pin interlocks the insulator with the metal portion of the wireholder eliminating falling wire hazard should the insulator become broken.

Peirce wireholders are also made in multi-point types. They are provided with ample mounting holes spaced away from the insulator eliminating the possibility of breaking the insulator when driving the screw.

The corner iron No. 501 is used for attaching multi-point wireholders to the corner of a building when occasion demands this type of construction.

Cat. No.	No. of Wires	Wire Spacing Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
190	1	0	50	65	**$18.70**
191	1	0	45	118	**22.80**
191-A	1	0	50	86	**20.40**
296	2	6	25	190	**50.10**
299	2	9	25	228	**52.70**
394	3	4½	25	270	**71.40**
396	3	6	25	300	**75.00**
494	4	4½	25	404	**83.40**
1190	1	0	125	135	**27.40**
1602	*	*	100	35	**8.80**
1604	**	**	100	59	**13.80**
501	Corner Iron		275	43	**13.40**

*Insulator with ½x11/16-inch wire hole. **With ¾x⅞-inch hole.

Peirce Wireholders
All-Porcelain Type

No. 1625

No. 1607

No. 1621

The screw type All-Porcelain Wireholder combines a wall bracket, insulator and screw all in one. A jab and a few turns is all that is necessary to install it. This type of wireholder has been designed so that no metal is exposed after installation.

The insulator is small and fits the hand. The wire hole grooves are well rounded so that they will not injure the insulation of the line wire. The insulators have an ample factor of safety for all secondary voltages.

The special wood screw which is a part of this wireholder has a clean cut thread and a point which starts into the wood under very little pressure. The cement used in attaching the screws is non-porous; weather does not affect it.

No. 31 expansion shields are used for mounting the screw type wireholders into brick, stone or concrete buildings.

Nos. 1607, 1614, 1621 and 1625 are equipped with galvanized screw; Nos. 1617, 1624, 1631 and 1635 with brass screw; Nos. 1627, 1634, 1641 and 1645 with toggle bolt; Nos. 1637, 1644, 1651 and 1655 with carriage bolt.

Cat. No.	Size of Screw or Bolt Inches	Size of Wire Holes Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
1607	No. 22x2	11/16x13/16	50	95	**$18.70**
1617	No. 22x2	11/16x13/16	50	95	**22.60**
1627	¼x4½	11/16x13/16	50	100	**39.10**
1637	⅜x5	11/16x13/16	50	125	**29.60**
1614	No. 20x2	11/16x¾	50	90	**17.00**
1624	No. 20x2	11/16x¾	50	90	**19.30**
1634	¼x4½	11/16x¾	50	105	**37.40**
1644	⅜x5	11/16x¾	50	105	**28.00**
1621	No. 20x2	7/16 x¾	50	65	**15.30**
1631	No. 20x2	7/16 x¾	50	65	**18.00**
1641	¼x4½	7/16 x¾	50	80	**30.80**
1651	⅜x5	7/16 x¾	50	80	**27.80**
1625	No. 22x2¼	29/32	50	125	**27.40**
1635	No. 22x2¼	29/32	50	125	**30.20**
1645	¼x4½	29/32	50	150	**44.70**
1655	⅜x5	29/32	50	140	**35.30**

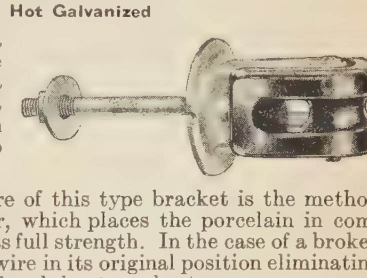
Peirce Wireholders
All-Porcelain Multi-Point Type
Hot Galvanized

Equipped with No. 1654 All Porcelain Insulators which have a ⅜-inch bolt and cork washer. Insulators can be installed after back has been mounted to building and can be easily removed or installed to make various spacing wireholders. Base is No. 12 gauge presteel channel 2⅜ inches wide with ½-inch flanges. Mounting slots are 5/16x1½-inch with 7/16-inch center punch. Cork washer prevents breakage of insulators when assembling.

Cat. No.	No. of Wires	Wire Spacing Inches	Std. Pkg.	Weight Pounds per 100	Price per 100
3296	2	6	25	250	**$51.30**
3299	2	9	25	275	**54.00**
3394	3	4½	25	360	**70.80**
3396	3	6	25	375	**78.00**
1654	Insulator		50	90	**17.00**

Peirce Dead-End Brackets
For Railway Signal Circuits
Hot Galvanized

Equipped with a ⅜ x 4½-inch carriage bolt with sufficient thread to make it suitable for use on cross arms 3¼x4¼ to 4x5 inches.

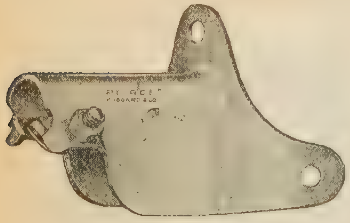


An important feature of this type bracket is the method of attaching insulator, which places the porcelain in compression, developing its full strength. In the case of a broken insulator it holds the wire in its original position eliminating possibility of a false signal due to a short.

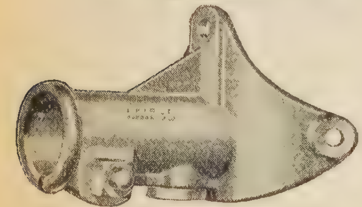
Cat. No.	Dimensions, Inches: Size of Bolt	Dimensions, Inches: Insulator Hole	Std. Pkg.	Weight Pounds per 100	Price per 100
195	⅜x4½	½x11/16	50	112	**$31.00**

Hubbard Pole Plates for Pipe Attachments

One-Piece Presteel and Malleable Types



No. 3901



No. 4752

For mounting pipe mast arms, but may be put to a variety of uses for attaching pipe fixtures to poles. Top mounting holes are 11/16 inch diameter, side holes are 9/16 inch diameter.

No. 3701 is used with ¾-inch pipe and gooseneck brackets.

No. 3900 Series are one-piece presteel, used with 1¼-inch pipe and mast arms; furnished either plain or insulated for internal wiring and with pulleys for internal or external chain operation.

Nos. 4752 and 4755 certified malleable plates with special gripping arrangement for 1¼ and 2-inch pipe, respectively, are insulated for internal wiring when used with mast arms. Pipe used with them must be swaged with an indentation deep enough and properly placed to assure free passage of clamp bolts to fasten pipe.

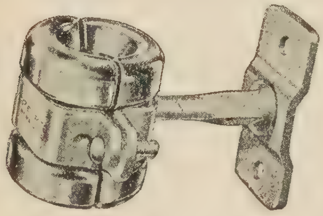
Cat. No.	Per 100	Style	Pipe Size	Dimensions, Inches: Vert. Pole Space	Horiz. Pole Space	Exten. from Pole	Wt. Lbs. per 100
3701	**$140.00**	Plain	¾	6	4	4	195
3901	**250.00**	Plain	1¼	6	9½	6¼	460
3903	**250.00**	Int. Chain	1¼	6	9½	6¼	545
3905	**250.00**	Ext. Chain	1¼	6	9½	6¼	545
3907	**250.00**	Int. Wiring	1¼	6	9½	6¼	530
4752	**250.00**	Int. Wiring	1¼	6⅝	10	5½	750
4755	**275.00**	Int. Wiring	2	7	10	6½	850

Hubbard Lamp Lead Brackets

Closed and Split Types

Hot Galvanized

No. 173



No. 164

No. 1660

Used for supporting vertical leads of duplex cable or twisted single wires between the cross-arm and the lighting fixture.

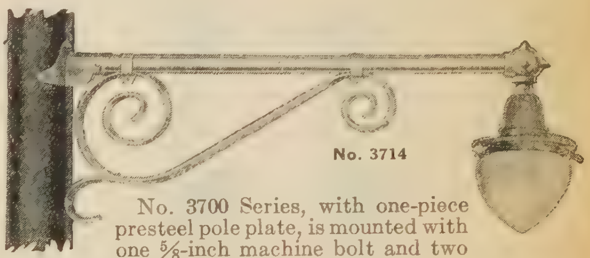
Split type facilitates installation, repair and replacement of lamp lead cables. All split type parts secured against accidental dropping. Metal brackets provide 5-inch extensions and are furnished with base plates having 7/16-inch mounting holes or with lag screw threads and machine threads for use with Peirce Adjustable Pole Bands and as mast arm attachments. No. 1660, with pin cemented into insulator, has a 1-inch wire hole and provides 5 7/16-inch extension.

Cat. No.	Per 100	Size Screw Inches	Wire Hole Inches	Std. Pkg.	Wt. Lbs. per 100
163	**$124.90**	½x3 Lag	5/16 to ⅞x1⅛	25	255
163-A	**124.90**	⅝x ¾ Bolt	5/16 to ⅞x1⅛	25	255
163-B	**124.90**	½x2½ Bolt	5/16 to ⅞x1⅛	25	260
164	**131.40**	Base Plate	5/16 to ⅞x1⅛	25	300
173	**59.70**	½x3 Lag	1⅛x1⅛	20	230
173-A	**59.70**	⅝x ¾ Bolt	1⅛x1⅛	25	230
173-B	**59.70**	½x2½ Bolt	1⅛x1⅛	25	235
174	**66.20**	Base Plate	1⅛x1⅛	25	240
1660	**99.90**	½x3 Lag	1″ Diameter	25	230

Hubbard Street Hood Brackets

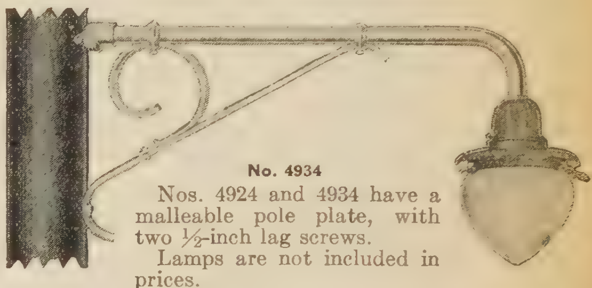
Hot Galvanized

These brackets are made of 1¼-inch pipe and are obtainable in straight and bent styles for either internal or external wiring. Standard lamp attachment threads are 1¼-inch, but lamps tapped for ¾-inch fittings can be attached by using Hubbard reducing bushing No. 3381, specified separately.



No. 3714

No. 3700 Series, with one-piece presteel pole plate, is mounted with one ⅝-inch machine bolt and two ½-inch lag screws.



No. 4934

Nos. 4924 and 4934 have a malleable pole plate, with two ½-inch lag screws.

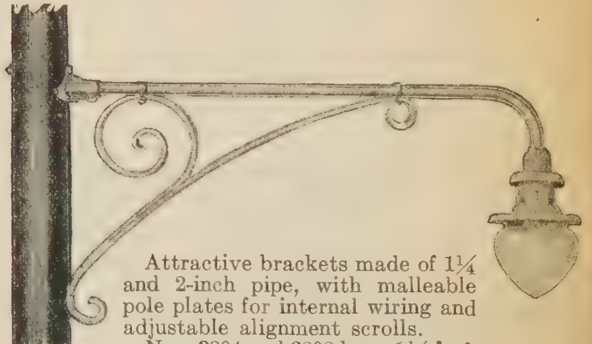
Lamps are not included in prices.

For External Wiring

Cat. No.	Each	Description	Extension Inches	Vert. Pole Space Inches	Std. Pkg.	Weight Pounds Each
3714	**$10.55**	Straight Arm	48	21	..	23½
3734	**9.80**	Bent Arm	48	21	..	23¾
4924	**10.55**	Straight Arm	48	23⅜	..	24
4934	**9.80**	Bent Arm	48	23⅜	..	23

With Bushings for Internal Wiring

Cat. No.	Each	Description	Extension Inches	Vert. Pole Space Inches	Std. Pkg.	Weight Pounds Each
3716	**$10.55**	Straight Arm	48	21	..	24
3736	**9.80**	Bent Arm	48	21	..	24½



Attractive brackets made of 1¼ and 2-inch pipe, with malleable pole plates for internal wiring and adjustable alignment scrolls.

Nos. 3804 and 3808 have 1¼-inch thread for lamp attachment; Nos. 3824 and 3828 have 2-inch thread.

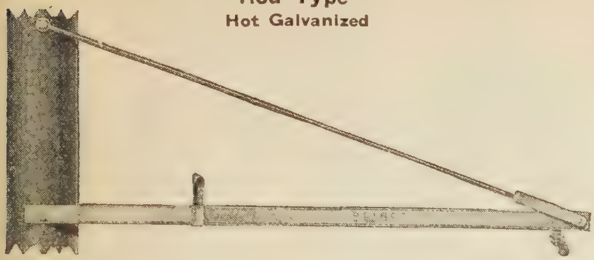
Scroll is made of 1¼x½x⅛-inch channel steel punched for ½-inch lag screw. Pole plate is mounted with one ⅝-inch machine bolt and two ½-inch lag screws.

Vertical Pole Space Inches	1¼-Inch Pipe: Cat. No.	Each	Lgth. Ft.	Wt. Lbs.	2-Inch Pipe: Cat. No.	Each	Lgth. Ft.	Wt. Lbs.
38	**3804**	**$13.35**	4	28	**3824**	**$16.00**	4	53
50½	**3808**	**18.75**	8	44	**3828**	**23.00**	8	67

Hubbard Presteel Trolley Mast Arms

Rod Type

Hot Galvanized



A safe, simple trolley arm. Long swinging loops of wire are eliminated. Lamp is out of reach of children, and cannot fall to street. Lamp trimmer climbs pole, pulls lamp in by rod attached to lamp hanger and pushes it back to place by the same rod.

Has ½-inch round eye rod, channel steel back brace, channel spreader arm, and operating rod with a trolley which has ¾-inch pipe-threaded connection for lamps.

Size of section, 1$\frac{11}{16}$x2$\frac{5}{16}$ inches. Standard package, 2.

Cat. No.	Each	Length Feet	Wt. Lbs.	Cat. No.	Each	Length Feet	Wt. Lbs.
3406	$15.60	6	38	3412	$21.80	12	62
3408	17.90	8	45	3414	25.20	14	72
3410	19.10	10	54	3416	28.90	16	79

Hubbard Presteel Trolley Mast Arms

Chain Type

Hot Galvanized

The latest development for street lighting. Carriage is operated by a continuous chain which is completely protected. All movable parts are equipped with brass bushings, permitting free, easy movement. Idler and sprocket are non-rusting alloy. Chain mechanism cannot join.

The arm is safe and simple; long swinging loops of wire are eliminated. Lamp trimmer climbs pole, unlocks handle and by revolving it pulls lamp toward him. Handle locking device will not freeze nor hinder quick operation.

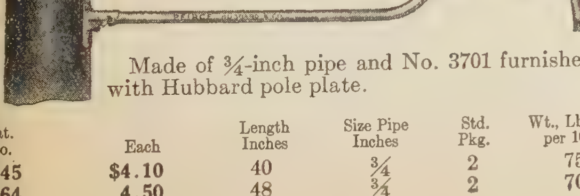
Size of section, 1$\frac{11}{16}$x2$\frac{5}{16}$ inches. Standard package, 2.

Cat. No.	Each	Length Feet	Wt. Lbs.	Cat. No.	Each	Length Feet	Wt. Lbs.
3606	$18.10	6	38	3612	$24.90	12	59
3608	20.00	8	45	3614	27.30	14	66
3610	22.50	10	52	3616	30.50	16	73

Hubbard Street Hood Brackets

Goose Neck Type

Hot Galvanized

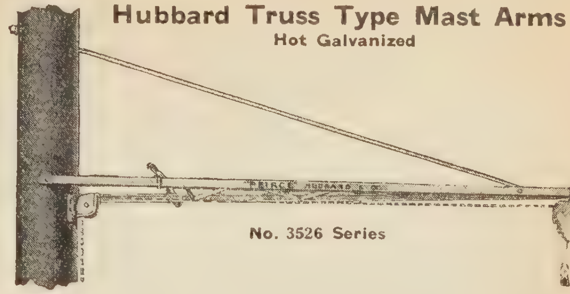


Made of ¾-inch pipe and No. 3701 furnished with Hubbard pole plate.

Cat. No.	Each	Length Inches	Size Pipe Inches	Std. Pkg.	Wt., Lbs. per 100
3745	$4.10	40	¾	2	750
3764	4.50	48	¾	2	700

Hubbard Truss Type Mast Arms

Hot Galvanized



No. 3526 Series

Arms are made of 1½x¾x⅛-inch channel steel, trussed with 1x$\frac{3}{16}$-inch flat steel strips. Reliable, strong, sturdy reinforced structures supported by ½-inch rods. Braced against sway and uplift. Obtainable in four practical, efficient styles, in flexible and rigid studs and for chain operation. Chain ordered separately.

No. 3506 Series, with two standard No. 1520 sleet-proof pulleys and one spreader arm, operates with chain.

No. 3526 Series, with No. 1520 sleet-proof pole pulley, No. 1525 sleet-proof end pulley and one spreader, operates with chain.

No. 3546 Series, with flexible stud and two spreaders, provides a fixed semi-rigid installation.

No. 3566 Series, with rigid stud and two spreader arms provides a fixed rigid installation.

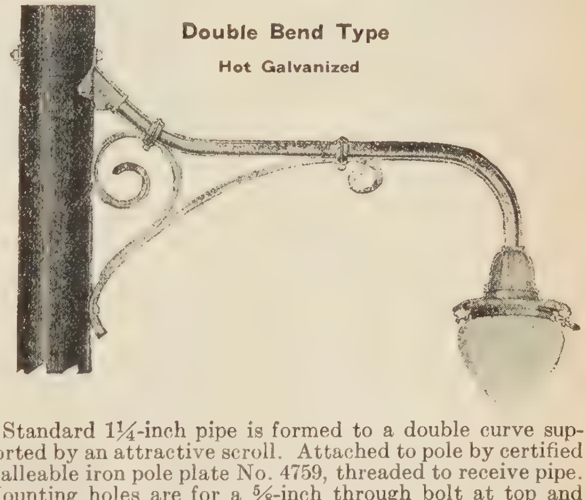
	Standard Type				Sleet-Proof Pulley Type			
Length Feet	Cat. No.	Each	Std. Pkg.	Wt. Lbs.	Cat. No.	Each	Std. Pkg.	Wt. Lbs.
6	3506	$13.20	5	35	3526	$15.20	4	38
8	3508	15.90	5	41	3528	17.90	4	44
10	3510	18.60	5	48	3530	20.60	4	51
12	3512	21.50	5	56	3532	23.50	4	59
14	3514	22.60	5	65	3534	24.60	4	68
16	3516	25.80	5	75	3536	27.80	4	78
	Flexible Stud Type				Rigid Stud Type			
6	3546	$12.20	4	30	3566	$12.20	4	31
8	3548	14.90	4	36	3568	14.90	4	37
10	3550	17.60	4	43	3570	17.60	4	44
12	3552	20.50	4	51	3572	20.50	4	52
14	3554	21.60	4	60	3574	21.60	4	61
16	3556	24.80	4	70	3576	24.80	4	71

No. **1520** Sleet-Proof Pulley; Std. Pkg. 10; Weight 330 Pounds per 100........................each **$2.10**
No. **1525** Sleet-Proof Pulley with Clamp Knob; Weight 690 Pounds per 100.................each **3.90**
No. **1530** Galv. Mast Arm Chain (Specify Length).. ....

No. 3790 Hubbard Street Hood Brackets

Double Bend Type

Hot Galvanized



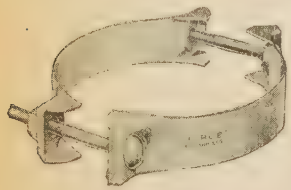
Standard 1¼-inch pipe is formed to a double curve supported by an attractive scroll. Attached to pole by certified malleable iron pole plate No. 4759, threaded to receive pipe. Mounting holes are for a ⅝-inch through bolt at top and ½-inch lag screws at sides. A porcelain insulator bushing is provided for internal wiring. The scroll support is attached to pole by means of a ½-inch lag screw and to pipe by positive clamping arrangement.

Extension, 48 inches. Vertical pole space, 34 inches.
No. **3790**, Weight Each, 32 Pounds............each **$11.65**

Hubbard Adjustable Pole Bands

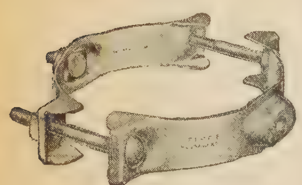
Hot Galvanized

The Hubbard Cup, a feature of this new band, is pressed to a shape which provides maximum strength to resist strains applied from any direction. Shoulders are formed for absolute rigidity and provide a maximum gripping surface on the pole. Tightening of bolts to the utmost cannot deform the band. Standard ⅝-inch bolt heads fit inside the cup and cannot turn. Special ½-inch bolt No. 8390 fitted with an oversize head can be had for ½-inch fittings. Hole is 11/16-inch diameter. Band is 12-gauge by 2-inch pressed steel.



Plain Style

Single Cup



Double Cup

Cat. No.	Per 100	Std. Pkg.	Wt., Lbs. per 100
Plain Style			
8333	$39.20	50	113
8334	43.20	50	122
8335	45.00	45	130
8336	49.00	35	147
8338	52.00	60	173
8340	60.80	45	207
8342	72.50	35	249
Single Cup			
8353	$41.10	50	117
8354	45.00	50	125
8355	47.10	45	133
8356	51.90	55	150
8358	54.90	50	176
8360	62.70	40	210
8362	74.40	30	252
Double Cup			
8373	$43.20	50	120
8374	47.10	45	128
8375	48.90	45	136
8376	54.90	50	153
8378	57.80	45	179
8380	64.60	40	213
8382	76.50	30	215

Table for Determining Pole Band and Carriage Bolt Sizes for Various Outside Pole Diameters

							*Carriage Bolts Cat. No.
Plain 8333	8334	8335	8336	8338	8340	8342	
Single 8353	8354	8355	8356	8358	8360	8362	
Double 8373	8374	8375	8376	8378	8380	8382	
Outside Pole Diameters, Inches							
3½	4	4½	5½	7	9	11½	9642
3¾	4¼	4¾	5¾	7¼	9¼	11¾	9642½
4	4½	5	6	7½	9½	12	9643
		5¼	6¼	7¾	9¾	12¼	9643
		5½	6½	8	10	12½	9643½
			6¾	8¼	10¼	12¾	9644
			7	8½	10½	13	9644½
				8¾	10¾	13¼	9645
				9	11	13½	9645½
					11¼	13¾	9646
					11½	14	9646
						14¼	9646¼
						14½	9647

Note: For any selected pole diameter the three styles of bands to fit are listed at top of column with corresponding carriage bolts at extreme right.

*Carriage bolts must be ordered separately.

Peirce Swinging Knob Fixtures

Hot Galvanized

These fixtures are used for making house service connections. The sister hook arrangement permits the removal of the insulator, for driving the screw, without the use of tools.

The No. 2928 is equipped with a Peirce No. 1606 insulator. The No. 2929 with a Peirce No. 355 insulator.

Price, No. **2928**, Wt. 141 Lbs. per 100........per 100 **$40.10**
Price, No. **2929** Wt. 262 Lbs. per 100........per 100 **66.60**

Extra Double Galvanized Telephone and Telegraph Wire

Extra Best Best (E. B. B.) is highest in electrical conductivity, having a range of electrical resistance of 4700 to 5000 mile ohms.

Best Best (B.B.). Slightly higher in resistance than E.B.B. but combines conductivity with tensile strength to make a popular grade, having a maximum electrical resistance of 5600 mile ohms.

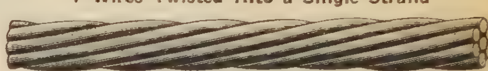
Steel is designed for short-line service, where electrical conductivity can be sacrificed for tensile strength. Maximum resistance 6500 mile ohms.

All grades galvanized under the same improved process.

Size B.W.G.	Diam. In.	Wt., Lbs. per Mile	Miles Wire in Bundle	Approx. Breaking Strain, Lbs. E. B. B.	B. B.	Steel
4	.238	811	¼	2028	2271	2433
6	.203	590	⅓	1475	1652	1770
8	.165	390	½	975	1092	1170
9	.148	314	½	785	879	942
10	.134	258	½	645	722	774
11	.120	206	½	515	577	618
12	.109	170	½	425	476	510
14	.083	99	½	247	277	297

Crapo Galvanized Steel Strand Guy Wire

7 Wires Twisted Into a Single Strand



Diameter Inches	Weight Pounds per 1000 Feet	Standard Single and Double Galvanized Per 100 Ft.	Strength Pounds	Siemens-Martin Double Galvanized Per 100 Ft.	Strength Pounds
⅝	813	**$8.50**	11600	**$8.25**	19100
½	517	**5.50**	7400	**5.25**	12100
7/16	399	**4.50**	5700	**4.30**	9350
⅜	296	**3.50**	4250	**3.25**	6950
5/16	205	**2.50**	3200	**2.50**	5350
¼	121	**1.75**	1900	**2.05**	4250
3/16	72.9	**1.25**	1150	**1.70**	3150
5/32	51.3	**1.15**	870	**1.35**	1900

Diameter Inches	Weight Pounds per 1000 Feet	High Strength Strand Double Galvanized Per 100 Ft.	Strength Pounds	Extra High Strength Strand Double Galvanized Per 100 Ft.	Strength Pounds
⅝	813	**$12.00**	29600	**$14.60**	42400
½	517	**7.25**	18800	**8.80**	26900
7/16	399	**6.00**	24500	**7.20**	20800
⅜	296	**4.40**	10800	**5.25**	15400
5/16	205	**3.20**	8000	**4.25**	11200
¼	121	**2.25**	4750	**2.85**	6650
3/16	72.9	**1.80**	2850	**2.40**	3990

Oshkosh Diggers

No. 2051

The blades are made of special alloy steel. Welding is used for attaching the blades instead of riveting, making a durable joint. The fulcrum members are of heavily constructed, channel-shaped, steel forgings.

There are two pivot points for the blades, one on each side. This gives much stronger leverage and greater durability.

Made in two types, with split handles or with two solid handles. The handles are made of straight grained hard wood, 8 feet long.

Measurement marks are placed on the handles so that the workman can easily determine the exact depth of the hole.

The diameter of the circle circumscribed by the digger blades is 6 inches.

No. **2050**, Split Handle Type, Wt., 13 Lbs.......each **$7.66**
No. **2051**, Two Solid Handle Type, Wt., 14½ Lbs. each **7.66**

Never-Creep Anchors

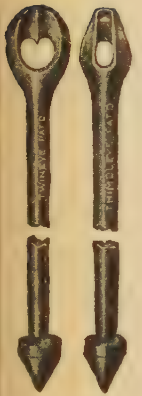
The Never-Creep Anchor consists of a 1-piece rod and 1-piece malleable iron plate that pulls against the solid undisturbed earth.

It possesses all the merits of the dead-man but eliminates the necessity of digging a pit and cutting a channel.

To install, simply bore the hole, drive the rod and hang on the plate.

Cat. No.	Per 100	Size Plate In.	Wt. Lbs. per 100
510	$2.10	5x10	376
615	3.00	6x15	690
620	4.20	6x20	925
820	6.30	8x20	1240
825	8.00	8x25	1960
830	9.00	8x30	2670
835	10.00	8x35	3095
1040	14.00	10x40	4775

Twineye Rods



Cat. No.	Per 100	Size	Wt Per 100
360	$153.55	¾"x6'	970
370	170.15	¾"x7'	1130
380	188.65	¾"x8'	1255
170	291.58	1"x7'	2160
180	346.35	1"x8'	2310

Thimbleye Rods

25	$71.73	½"x5'	390
26	79.61	½"x6'	400
56	111.05	⅝"x6'	680
57	123.74	⅝"x7'	755
58	135.58	⅝"x8'	830
36	143.80	¾"x6'	960
37	160.40	¾"x7'	1120
38	178.90	¾"x8'	1245
17	285.83	1"x7'	2150
18	316.70	1"x8'	2300

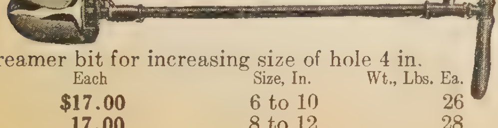
Chance Screw Anchors

This socket type screw anchor is made of semi-steel. Improvements include a wide spiral correctly pitched for ease of installation, a wide helix and sharp blades.

May be installed with a standard screw anchor wrench with adapter attachment which will be sent on request.

Cat. No.	Each	Size In.	Size Rod In.	Wt. Lbs. per 100
126	$3.10	6	½	988
586	3.50	6	⅝	1120
587	4.10	7	⅝	1323
347	4.60	7	¾	1650
588	5.40	8	⅝	1680
348	6.00	8	¾	1980
5810	6.60	10	⅝	2170
3410	7.40	10	¾	2455

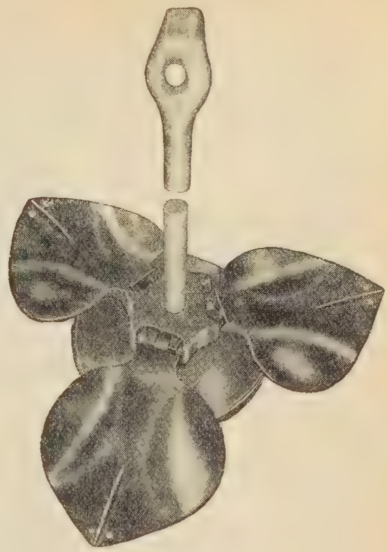
Chance Heavy Telegraph Augers
With Telescoping Handle



With reamer bit for increasing size of hole 4 in.

Cat. No.	Each	Size, In.	Wt., Lbs. Ea.
10	$17.00	6 to 10	26
12	17.00	8 to 12	28

Wej-Lock Expanding Anchors



The Wej-Lock Balanced Anchor may be used as an expanding anchor, a cone anchor or as a dead man. When spread or partially spread, it is cone shaped, developing equalized strain which is responsible for its exceptional holding power. It is the only malleable iron expanding anchor with a nut retainer.

Cat. No.	Each	Size Anchor	Size Rod	Wt., Lbs. per 100
836	$3.40	8"–3 Way	¾"	1350
8310	4.20	8"–3 Way	¾"	1548
8412	4.60	8"–4 Way	¾"	1690
1044	8.00	10"–4 Way	1"	3000

Chance New Improved Expanding Anchors

Has both housing and base for supporting plates; expanding arms hinged to cross head by 1-piece spider; interlocking plates; expanding arms hinged to plates by clinched loops; wide deep ribbed expanding arms; drop-forged expanding head; marginal guideways for guiding plates and holding anchor together.

Cat. No.	Each	Size Anchor	Max. Rod	Wt. Lbs. per 100
62	$2.10	6"–2 Way	⅝"	485
64	2.60	6"–4 Way	¾"	735
824	3.00	8"–2 Way	¾"	935
82	3.40	8"–2 Way	¾"	1015
8410	4.20	8"–4 Way	¾"	1445
84	4.60	8"–4 Way	¾"	1588
104	8.00	10"–4 Way	1"	2550
124	13.00	12"–4 Way	1¼"	4175

Chance Pyramid Cone Anchors

This improved cone anchor has 6 flat faces which in conjunction with the wedging portions act as a flat wedge without danger of rotation. The flaring base gives a final grip to the wedge thus greatly increasing the holding power.

Cat. No.	Each	Size In.	Max. Size Rod In.	Wt. Lbs. per 100
6	$1.04	6	⅝	320
8	1.42	8	¾	668
10	2.10	10	¾	1015
12	2.90	12	1	1690
16	5.80	16	1	2830
19	9.20	19	1¼	4760
23	10.96	23	1¼	6550

Hubbard Steelwing Anchors

Hot Galvanized

Having large bearing surfaces with sharp screw edges, these anchors are easily installed and provide efficient and substantial anchorage against undisturbed earth; will not creep. No digging required; no adjustments under ground necessary.

Cat. No.	Per 100	Diameter Inches Wing	Diameter Inches Rod	Overall Length Rod Feet	Std. Pkg.	Ship. Wt., Lbs. per 100
7524-A	**$124.90**	4	¾	4½	10	738
7526-A	**249.80**	6	¾	5½	10	1040
7527-A	**391.70**	7	1	5½	10	1750
7528-A	**458.00**	8	1	5½	10	1860
7530-A	**641.10**	10	1¼	5½	10	2900
7550-A	**699.40**	10	1¼	8	5	3690

To obtain anchor with thimbleye, drop A from catalog number.

Hubbard Steelwing Swamp Anchors

Hot Galvanized

These anchors have enormous holding power when embedded the proper depth in swampy soil.

Anchor unit consists of solid steelwing, short solid steel shaft threaded to take 1¼-inch pipe coupling and 1¼-inch pipe cap with forged eye to screw onto pipe extension shaft. Pipe is cut to meet anchor requirements but is not furnished as part of anchor.

Over all length, length of pipe used plus 10 inches. Size strand, ½ inch or under.

Cat. No.	Per 100	Diam. Wing In.	Diam. Shank	Std. Pkg.	*Ship. Wt., Lbs. per 100
7548	**$352.60**	8	Std. 1¼″ Pipe	3	920
7549	......	10	O.D. 1.66″	2	1370

*Not including pipe and coupling.

No. 7546 Hubbard Rock Guy Bolts

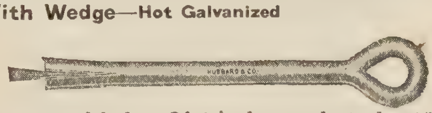
Hot Galvanized

Used where solid rock extends to surface or in stone or concrete walls. Of 1″ round steel, 18″ long, with drop forged eye (1½x2″ inside). Std. pkg., 20. Ship. wt., 600 lbs. per 100.

Price, No. **7546**.............................per 100 **$95.00**

No. 7547 Hubbard Rock Guy Bolts

With Wedge—Hot Galvanized



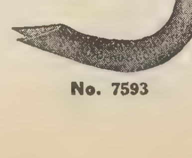
Has wedge and split end which spreads bolt as wedge is driven against bottom of hole. Of 1-inch round steel, 18″ long. Std. pkg., 20. Ship. wt., 600 pounds per 100.

Price, No. **7547**..........................per 100 **$104.00**

Hubbard Guy Thimbles

Hot Galvanized

Cat. No.	Size Strand Inches	Size Guy Rod Inches	Std. Pkg.	Wt. Lbs. per 100	Price per 100
7593	⅜	½ and ⅝	1000	11	**$7.58**
7594	½	⅝ and ¾	500	21	**9.75**
7595	⅝	1	250	42	**13.75**



No. 7593

Everstick Expanding Anchors

Ease of installation, ease of expansion, maximum power and long life are the result of years of experience and improvements in these anchors.

The exclusive Everstick guides hold the plates in perfect alignment during expansion of the anchor.

Anchors are made of certified malleable iron.

Expanded

2-Way Anchors

This anchor can be depended upon to give outstanding service in comparison to any anchor of like size and capacity.

For many uses in pole line construction.

No.	Each	Anchor and Hole In.	Size Rod Inches	Area Expanded Sq. In.	Anchor Wt. Lbs.	Holding Power—Pounds Ordinary Soil	Holding Power—Pounds Firm Soil
52	**$1.60**	5	⅝	30	4	2000	3000
62	**2.10**	6	⅝	60	7	3000	6000
82	**3.40**	8	¾	100	10	7000	14000

Expanded

3-Way Anchors

An ideal guy anchor for all around use. Built to hold strains 100 per cent greater than rated holding power for ordinary soils.

A 6 and 10-inch anchor can be furnished proportionately designed for minimum and maximum strain requirements.

No.	Each	Anchor and Hole In.	Size Rod Inches	Area Expanded Sq. In.	Anchor Wt. Lbs.	Holding Power—Pounds Ordinary Soil	Holding Power—Pounds Firm Soil
633	**$2.60**	6	⅝	65	6½	3000	6000
833	**3.00**	8	⅝	75	7½	3000	6000
834	**3.00**	8	⅝	90	9	4000	8000
836	**3.40**	8	¾	110	11	8000	16000
8310	**4.20**	8	¾	125	13	10000	20000
8312	**4.60**	8	1	130	14	12000	24000
10316	**8.00**	10	1	190	25	20000	40000

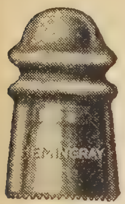
Expanded

4-Way Anchors

Recommended for heavy duty anchorage and long service under the most severe conditions.

Ease of expansion and great holding power are features of this anchor.

No.	Each	Anchor and Hole In.	Size Rod Inches	Area Expanded Sq. In.	Anchor Wt. Lbs.	Holding Power—Pounds Ordinary Soil	Holding Power—Pounds Firm Soil
64	**$2.60**	6	¾	75	9	4000	8000
84	**4.20**	8	¾	125	15	10000	20000
84	**4.60**	8	1	132	15½	12000	24000
104	**8.00**	10	1	210	28	20000	40000
124	**13.00**	12	1¼	320	54	32000	64000

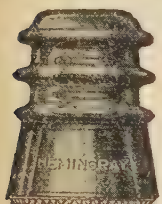


No. 9 Hemingray Glass Insulators

Pony

Over all: height, 3¾″; diameter, 2¼″.

Diameter Groove	inches	⅜
Weight, Each	pounds	9/16
Quantity per Box		250
Weight per Box	pounds	162
No. **9**	per 1000	**$94.70**



No. 10 Hemingray Glass Insulators

Exchange Line

Over all: height, 3¼″; diameter, 2½″.

Diameter Groove	inches	7/16
Quantity per Box		250
Weight per Box	pounds	176
No. **10**	per 1000	**$94.60**

No. 12 Hemingray Glass Insulators

Double Groove, Pony

Over all: height, 3⅝″; diameter, 2⅜″.

Diameter Top Groove	inches	⅜
Weight, Each	pounds	⅝
Quantity per Box		250
Weight per Box	pounds	188
No. **12**	per 1000	**$94.60**

No. 14 Hemingray Glass Insulators

Deep Groove, Double Petticoat, Pony

Over all: height, 3⅜″; diameter, 2⅞″.

Diameter Groove	inches	⅜
Weight, Each	pounds	¾
Quantity per Box		200
Weight per Box	pounds	160
No. **14**	per 1000	**$120.40**

No. 16 Hemingray Glass Insulators

Long Distance

Over all: height, 4″, diameter, 2⅝″.

Diameter Groove	inches	⅜
Weight, Each	ounces	15½
Quantity per Box		175
Weight per Box	pounds	185
No. **16**	per 1000	**$141.00**

No. 19 Hemingray Glass Insulators

Deep Groove, Double Petticoat

Over all: height, 3⅞″; diameter, 3¼″.

Diameter Groove	inches	½
Weight, Each	ounces	18
Quantity per Box		150
Weight per Box	pounds	186
Leakage Distance	inches	4⅛
Wet Arcing Distance	inches	1
No. **19**	per 1000	**$168.30**

No. 20 Hemingray Glass Insulators

Street Railway

Over all: height, 4″; diameter, 3¼″.

Diameter Groove	inches	¾
Weight, Each	ounces	18
Quantity per Box		150
Weight per Box	pounds	186
Leakage Distance	inches	4⅜
Wet Arcing Distance	inches	1
No. **20**	per 1000	**$168.30**

No. 42 Hemingray Glass Insulators

Double Petticoat

Over all: height, 4⅛″; diameter, 3¾″.

Diameter Groove	inches	5/16
Weight, Each	ounces	24
Quantity per Box		100
Weight per Box	pounds	169
Leakage Distance	inches	6½
Wet Arcing Distance	inches	1¼
No. **42**	per 1000	**$196.00**

No. 43 Hemingray Glass Insulators

Top Groove, Western Union

Over all: height, 4¼″; diameter, 3⅝″.

Diameter Groove	inches	5/16
Weight, Each	ounces	25
Quantity per Box		100
Weight per Box	pounds	199
No. **43**	per 1000	**$225.00**

No. 53 Hemingray Glass Insulators

One-Piece Transposition

Over all; height, 4½″; diam., 4″.

Diameter Groove	inches	⅜
Weight, Each	ounces	28½
Quantity per Box		50
Weight per Box	pounds	110
No. **53**	per 1000	**$291.20**

Hemingray Glass Cable Insulators

Primary Power Distribution Circuit

No. 60

Line Voltage 6600

Over all: height, 5″; diam., 3¼ .

Diameter Groove	inches	1&1½
Weight, Each	ounces	30
Quantity per Box		50
Weight per Box	pounds	115
No. **60**	per 1000	**$258.70**

No. 61

Line Voltage 6600

Over all: height, 3¾″; diam., 3¼″.

Diameter Groove	inches	1
Weight, Each	ounces	18
Quantity per Box		150
Weight per Box	pounds	189
No. **61**	per 1000	**$226.40**

No. D-62

Voltage Rating 6600

Over all: height, 4″; diam., 3⅝″.

Diameter Groove	inches	1¼
Weight, Each	ounces	25½
Quantity per Box		100
Weight per Box	pounds	172
Leakage Distance	inches	5⅜
Wet Arcing Distance	inches	1½
No. **62**	per 1000	**$258.70**

No. D-71 Hemingray Glass Insulators

High Voltage

Line Voltage 10000

Height, 3¾″; diam., 4¾″.

Diameter Groove	inches	⅝
Weight, Each	ounces	32
Quantity per Box		50
Weight per Box	lbs.	122
Leakage Distance	in.	7
Wet Arcing Distance	in.	1¾
No. **D-71**	per 1000	**$232.90**

No. D-72 Hemingray Glass Insulators

High Voltage **Line Voltage 10000**

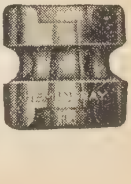
Height, 4″; diam., 4¾″.

Diameter Groove	inches	1½
Weight, Each	ounces	37
Quantity per Box		50
Weight per Box	pounds	137
Leakage Distance	inches	8¾
Wet Arcing Distance	inches	1¾
No. D-72	per 1000	**$232.90**

No. 103 Hemingray Insulating or Break Knobs

Old No. 3.

Height over all, 2 inches; diameter, 2 inches; groove, ⅝ inch; hole, ⅜ inch.



Cat. No.	Std. Pkg.	Wt., Lbs. Per Box	Price per 1000
103	500	220	**$90.70**

No. D-990 Hemingray Glass Insulators

Secondary Power Circuit

Over all: height, 2½″; diameter, 3″.

Diameter Groove	inches	¾
Weight, Each	ounces	12
Quantity per Carton		50
Weight per Carton	pounds	47
No. **D-990**	per 1000	......

No. D-510 Hemingray Glass Insulators

Primary Power Distribution Circuit

Voltage Rating 6600

Over all: height, 3½″; diameter, 3 5/16″.

Diameter Groove	inches	⅞
Weight, Each	ounces	20
Quantity per Carton		50
Weight per Carton	pounds	64
No. **D-510**	per 1000	......

No. D-512 Hemingray Glass Insulators

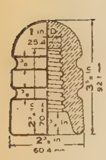
Primary Power Distribution Circuit

Voltage Rating 6600

Over all: height, 3¼″; diameter, 4″.

Diameter Groove	in.	¾
Weight, Each	oz.	24
Quantity per Carton		50
Weight per Carton	lbs.	79
No. **D-512**	per 1000	......

Thomas Porcelain One Part Telephone Insulators



No. 1011

Brown glaze.

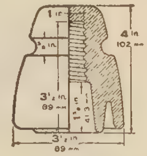
Cat. No.		1011	*1012
Nominal Rating	volts	1200	1200
Leakage Distance	inches	2	2¾
Mechanical Strength	pounds	2500	2500
No. in Barrel		400	500
Gross Weight per 100 pounds		84	66

*No. 1012 has 1 groove.

No. 1094 Thomas Porcelain One Part Pin Type Insulators

Brown glaze.

Electrical values given are based on tests conducted in accordance with A.I.E.E. Specification No. 41.

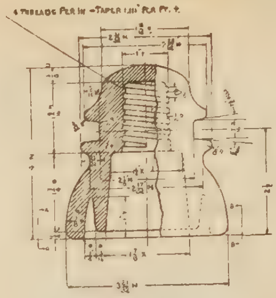


Nominal Rating	volts	5000
Dry Flash-Over Voltage		50000
Wet Flash-Over Voltage		26000
Leakage Distance	inches	6¾
Wet Arcing Distance	inches	1¾
Mechanical Strength	pounds	5000
Minimum Pin Height Recommended	inches	5¼
No. in Barrel		125
Gross Weight per 100	pounds	205

Whitall Tatum Transparent Glass Insulators

No. 1, Double Petticoat

(Similar to Hemingray-42)
Western Union and Postal Standard

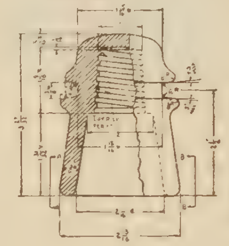


For use on toll circuits of greater length than 100 miles and on shorter lines where insulation conditions are very severe.

Weight, Each	oz.	**24¼**
No. in Carton		40
Ship. Wt., Carton	lbs.	65
Weight, per 1000	lbs.	1625

No. 2, Toll Line

(Similar to Hemingray-16)

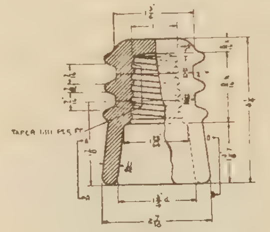


Standard on toll circuits less than 100 miles long.

Weight, Each	oz.	**14¾**
No. in Carton		50
Ship. Wt., Carton	lbs.	50
Weight, per 1000	lbs.	1000

No. 3, Exchange Line

(Similar to Hemingray-10 and 12)

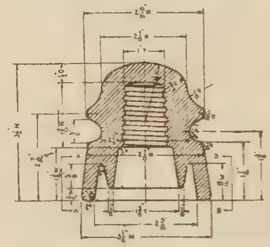


Used on local circuits in exchange areas. Upper wire groove is adapted for tying in line wire, and lower groove is employed for deadending under certain conditions.

Weight, Each	oz.	**10⅜**
No. in Carton		50
Ship. Wt., Carton	lbs.	35
Weight, per 1000	lbs.	700

No. 4, Deep Groove Double Petticoat

(Similar to Hemingray-14 and 19)



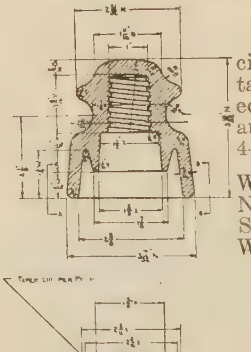
Used for electric light wiring on local lighting circuits.

Recommended for 4400-volt distribution.

Weight, Each	oz.	**17**
No. in Carton		50
Ship. Wt., Carton	lbs.	55
Weight, per 1000	lbs.	1100

No. 5, Extra Deep Groove Double Petticoat

(Similar to Hemingray-20)

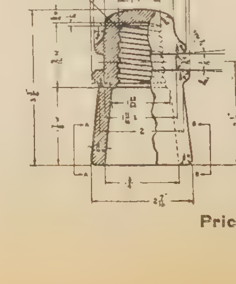


Used on electric light and power circuits. Diameter groove, ¾ inch; takes care of standard rubber-covered or weatherproof electric light and power wire. Has a capacity of 4400-volt distribution.

Weight, Each	oz.	**16½**
No. in Carton		50
Ship. Wt., Carton	lbs.	54
Weight, per 1000	lbs.	1080

No. 9, Pony

(Similar to Hemingray-9)



A telephone line insulator with rectangular side groove, preventing wire from slipping even though tie wires become loosened.

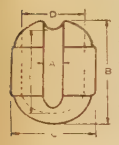
Weight, Each	oz.	**9⅜**
No. in Carton		50
Ship. Wt., Carton	lbs.	31
Weight, per 1000	lbs.	620

Prices upon Application

Thomas Porcelain Guy Strain Insulators

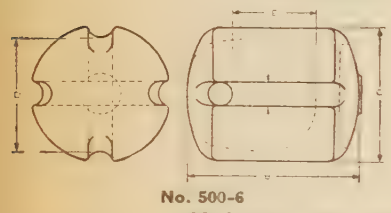
Dry process porcelain; brown glaze.

Cat. No.		361	362
Height	inches	3	4 7/16
Diameter	inches	2 5/8	3 1/4
Groove	inches	11/16	7/8
Mechanical Strength	pounds	19000	25000
No. in Barrel		500	182
Gross Weight per 100	pounds	78	215



Cat. No.		365	366
Height	inches	2 1/2	3 1/4
Diameter	inches	2 3/16	2 5/8
Groove	inches	1/2	5/8
Mechanical Strength	pounds	6500	15500
No. in Barrel		625	350
Gross Weight per 100	pounds	70	120

Thomas Standard Porcelain Guy Strain Insulators



No. 500-6

Dry or wet process porcelain, brown glaze.

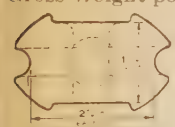
All these insulators are packed in convenient wire-bound wood boxes.

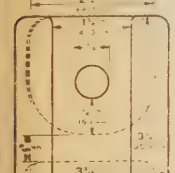
500 Series (Dry Process)

Cat. No.		500	502	504	506
Height	inches	2 1/8	3 1/4	3 5/8	5 1/4
Diameter	inches	1 9/16	2 5/8	2 7/8	3 3/8
Groove	inches	3/8	9/16	9/16	13/16
Mechanical Strength	pounds	4000	14000	19000	45000
No. in Box		200	72	72	30
Gross Weight per 100	pounds	25	139	171	333

602 Series (Wet Process)

Cat. No.		602	604	606	610
Height	inches	3 1/4	3 3/4	5 1/4	5 1/4
Diameter	inches	2 5/8	2 7/8	3 3/8	3 3/8
Groove	inches	9/16	9/16	13/16	1
Dry Flash-Over Voltage		23000	25000	31000	31000
Wet Flash-Over Voltage		14000	15000	20000	20000
Mechanical Strength	pounds	11000	19000	45000	45000
No. in Box		72	72	30	30
Gross Weight per 100	pounds	139	171	260	243

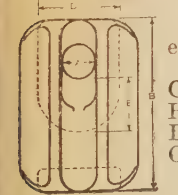




No. 508 Thomas Porcelain Break Strain Insulators

Dry process porcelain; brown glaze.

Cat. No.		508
Height	inches	3 3/4
Diameter	inches	3 3/16
Groove	inches	11/16
Mechanical Strength	pounds	19000
No. in Barrel		300
Gross Weight per 100	pounds	165



Thomas Porcelain Break Strain Insulators

Wet process porcelain; brown glaze.

A guy strain insulator also used for dead-ending.

Cat. No.		510	511	512	513	514
Height	in.	3 1/2	5 3/8	6 3/4	10	7
Diam.	in.	2 1/2	3 1/4	3 1/2	4 3/4	3 3/4
Groove	in.	5/8	3/4	7/8	1 1/2	1
Dry Flash-Over Voltage		30000	35000	40000	55000	45000
Wet Flash-Over Voltage		15000	20000	25000	30000	25000
Mechanical Strength	lbs.	10000	15000	20000	45000	20000
No. in Box		72	30	25	25	25
Gross Wt. per 100	lbs.	114	360	360	1085	470

Thomas Porcelain Assembled Strain Insulators

Wet process porcelain; bronze glaze.

A high grade type of assembled strain insulator. Used for dead-ending.

The insulator units used in these assemblies are taken from the 510 Series. The connecting links are similar in design to those used in the Thomas Link-Type Hewlett Insulator, and are made of soft copper, a material which readily shapes itself to the exact contour of the cableway under tension. Terminal fittings are steel forgings, hot dip galvanized.

While this type of insulator is most commonly used in single unit assemblies (Type 1) there are occasions when higher potentials or severe service make multi-unit assemblies desirable. Type 2 (2 unit strings) and 3 unit assemblies (Type 3) can also be furnished.

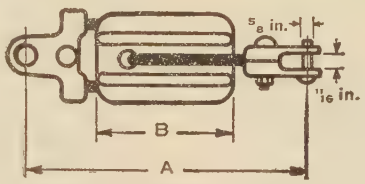
Special assemblies using strain hooks, strain eyes or standard cable-thimble can be made up promptly.

Insulators are shipped completely assembled.

The mechanical strength of any assembly is 8000 pounds.

Porcelain Units Used

Assembly No.	Insulator No.	Assembly No.	Insulator No.	Assembly No.	Insulator No.
11049	511	11051	511	11053	511
11050	512	11052	512	11054	512

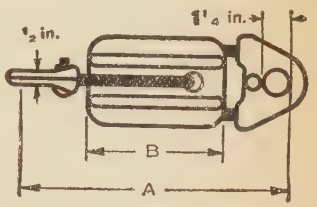


Cat. Nos. 11049-50, Type 1

Using Clevis Top and Bottom

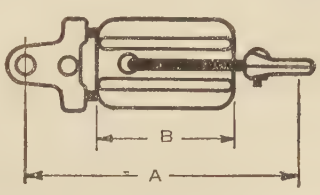
Cat. No.	Type No.	Dimensions, In. A	B	Flash-Over Voltage Dry	Wet	Std. Pkg.	Gross Wt., Lbs. per 100
11049	1	10 1/2	5 3/8	35000	20000	50	860
11049	2	18 1/4	5 3/8	65000	38000	25	1420
11049	3	26	5 3/8	90000	56000	12	2140
11050	1	11 7/8	6 3/4	40000	22000	50	980
11050	2	21	6 3/4	75000	42000	25	1680
11050	3	30 1/8	6 3/4	105000	62000	12	3320

Using Eye Top and Bottom



Cat. Nos. 11051-2, Type 1

11051	1	11	5 3/8	35000	20000	50	700
11051	2	18 3/4	5 3/8	65000	38000	25	1270
11051	3	26 1/2	5 3/8	90000	56000	12	1980
11052	1	12 3/8	6 3/4	40000	22000	50	830
11052	2	21 1/2	6 3/4	75000	42000	25	1520
11052	3	30 5/8	6 3/4	105000	62000	12	2360



Cat. Nos. 11053-54, Type 1

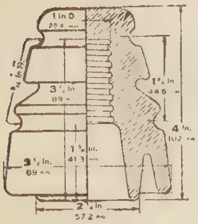
Using Clevis Top and Eye Bottom

11053	1	10 3/4	5 3/8	35000	20000	50	780
11053	2	18 1/2	5 3/8	65000	38000	25	1350
11053	3	26 1/4	5 3/8	90000	56000	12	2060
11054	1	12 1/8	6 3/4	40000	22000	50	910
11054	2	21 1/4	6 3/4	75000	42000	25	1600
11054	3	30 3/8	6 3/4	105000	62000	12	2440

Thomas Porcelain One-Part Pin Type Insulators

Brown Glaze

No. 1185

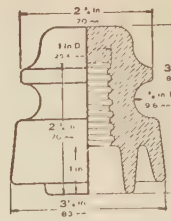


Transposition type insulator also commonly used for arc-light service.

Nominal Rating	volts	5000
Dry Flash-Over Voltage		*40000
Wet Flash-Over Voltage		*25000
Leakage Distance	in.	*5¼
Mechanical Strength	lbs.	2500
No. in Barrel		100
Gross Weight per 100	lbs.	190

*Measured between lower groove and pin. Dry flash-over between grooves is 23000 volts; wet flash-over, 13000 volts; leakage distance, 1¾ inches.

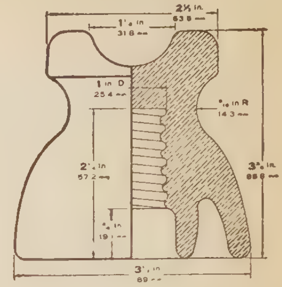
No. 1111



N. E. L. A. standard.
This insulator is packed in convenient wire-bound wood boxes.

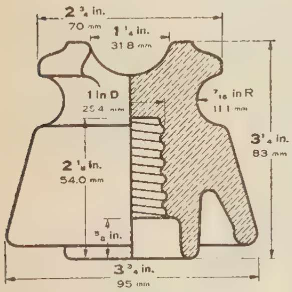
Nominal Rating	volts	5000
Dry Flash-Over Voltage		40000
Wet Flash-Over Voltage		20000
Leakage Distance	in.	5⅛
Dry Arcing Distance	in.	3
Mechanical Strength	lbs.	6000
Minimum Pin Height Recommended	in.	4¼
No. in Box		50
Gross Weight per 100	lbs.	122

No. 1049



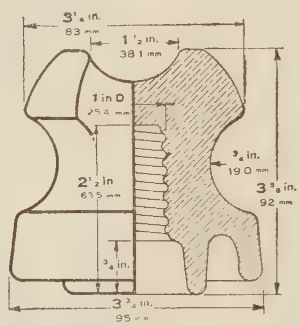
Nominal Rating	volts	5000
Dry Flash-Over Voltage		50000
Wet Flash-Over Voltage		23000
Leakage Distance	in.	5¼
Dry Arcing Distance	in.	3⅜
Mechanical Strength	lbs.	3000
Minimum Pin Height Recommended	in.	4
No. in Box		50
Gross Weight per 100	lbs.	132

No. 1205



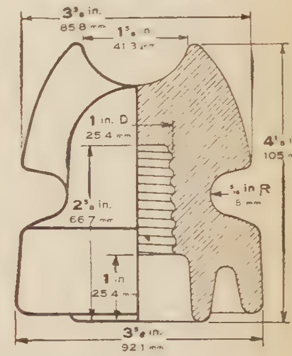
Nominal Rating	volts	6600
Dry Flash-Over Voltage		55000
Wet Flash-Over Voltage		25000
Leakage Distance	in.	5⅜
Dry Arcing Distance	in.	3⅝
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	4
No. in Box		50
Gross Weight per 100	lbs.	140

No. 1108



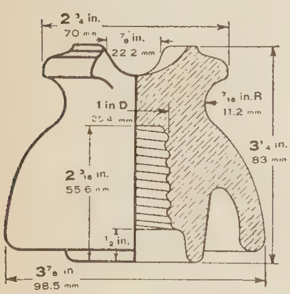
Nominal Rating	volts	6600
Dry Flash-Over Voltage		55000
Wet Flash-Over Voltage		30000
Leakage Distance	in.	5⅛
Dry Arcing Distance	in.	3¼
Mechanical Strength	lbs.	4000
Min. Pin Ht. Recommended	in.	4
No. in Barrel		100
Gross Weight per 100		154

No. 1084



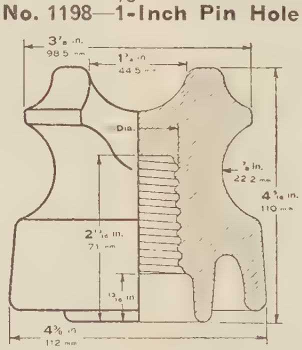
Nominal Rating	volts	7500
Dry Flash-Over Voltage		50000
Wet Flash-Over Voltage		23000
Leakage Distance	in.	5
Dry Arcing Distance	in.	3¼
Mechanical Strength	lbs.	4000
Min. Pin Ht. Recommended	in.	4⅜
No. in Barrel		125
Gross Weight per 100	lbs.	190

No. 1009



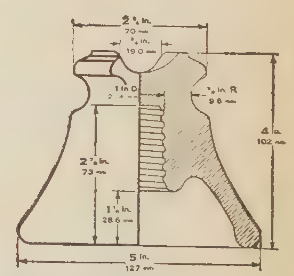
Nominal Rating	volts	8000
Dry Flash-Over Voltage		55000
Wet Flash-Over Voltage		25000
Leakage Distance	in.	5¾
Dry Arcing Distance	in.	3¾
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	4
No. in Box		50
Gross Weight per 100	lbs.	164

No. 1022—1⅜-Inch Pin Hole
No. 1198—1-Inch Pin Hole



Nominal Rating	volts	11000
Dry Flash-Over Voltage		60000
Wet Flash-Over Voltage		30000
Leakage Distance	in.	6¼
Dry Arcing Distance	in.	4⅛
Mechanical Strength	lbs.	5000
Min. Pin Ht. Recommended	in.	5
No. per Barrel		60
Gross Weight per 100	lbs.	400

No. 1164



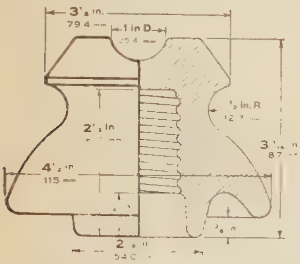
Nominal Rating	volts	11000
Dry Flash-Over Voltage		57000
Wet Flash-Over Voltage		40000
Leakage Distance	in.	6¼
Dry Arcing Distance	in.	5½
Mechanical Strength	lbs.	4000
Min. Pin Ht. Recommended	in.	5
No. per Barrel		100
Gross Weight per 100	lbs.	225

Electrical values given here are based on tests conducted in accordance with A. I. E. E. Specifications No. 41.

Thomas Porcelain One-Part Pin Type Insulators

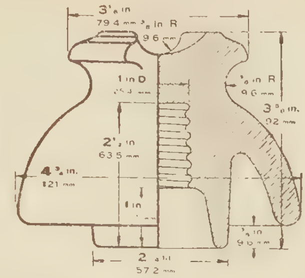
Brown Glaze

No. 1067—1⅜-Inch Pin Hole
No. 1197—1-Inch Pin Hole



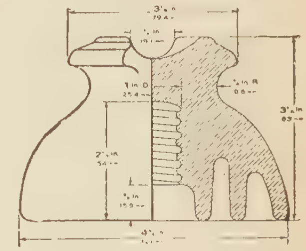
Nominal Rating..........volts	11000
Dry Flash-Over Voltage......	58000
Wet Flash-Over Voltage......	30000
Leakage Distance..........in.	5¼
Dry Arcing Distance.......in.	3⅞
Mechanical Strength......lbs.	4000
Min. Pin Ht. Recommended in.	4½
No. in Box..................	50
Gross Weight per 100.....lbs.	225

No. 1177—1-Inch Pin Hole
No. 1196—1⅜-Inch Pin Hole



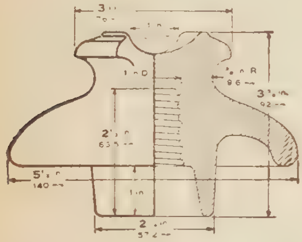
Nominal Rating............volts	13500
Dry Flash-Over Voltage.........	70000
Wet Flash-Over Voltage.........	42000
Leakage Distance............in.	7⅝
Dry Arcing Distance..........in.	4½
Mechanical Strength.........lbs.	3000
Min. Pin Ht. Recommended...in.	4¾
No. per Barrel..................	100
Gross Weight per 100........lbs.	245

No. 1153



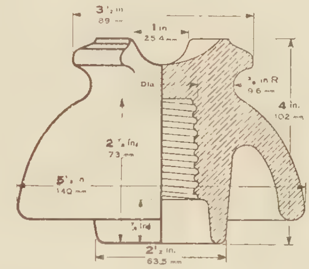
Nominal Rating.........volts	13500
Dry Flash-Over Voltage......	68000
Wet Flash-Over Voltage......	40000
Leakage Distance..........in.	8¾
Dry Arcing Distance.......in.	4½
Mechanical Strength......lbs.	3000
Min. Pin Ht. Recommended.in.	4½
No. per Barrel...............	100
Gross Weight per 100.....lbs.	260

No. 1188—1-Inch Pin Hole
No. 1190—1⅜-Inch Pin Hole



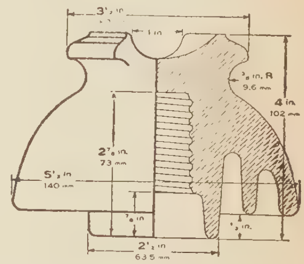
Nominal Rating.........volts	15000
Dry Flash-Over Voltage......	70000
Wet Flash-Over Voltage......	45000
Leakage Distance..........in.	7
Dry Arcing Distance.......in.	4⅞
Mechanical Strength......lbs.	4000
Min. Pin Ht. Recommended.in.	5
No. per Barrel...............	75
Gross Weight per 100.....lbs.	220

No. 1216—1-Inch Pin Hole
No. 1217—1⅜-Inch Pin Hole



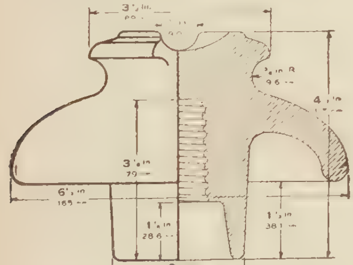
Nominal Rating............volts	17500
Dry Flash-Over Voltage.........	75000
Wet Flash-Over Voltage.........	45000
Leakage Distance............in.	8¼
Dry Arcing Distance..........in.	5¼
Mechanical Strength.........lbs.	4000
Min. Pin Ht. Recommended...in.	5
No. per Barrel..................	65
Gross Weight per 100........lbs.	340

No. 1151—1⅜-Inch Pin Hole
No. 1152—1-Inch Pin Hole



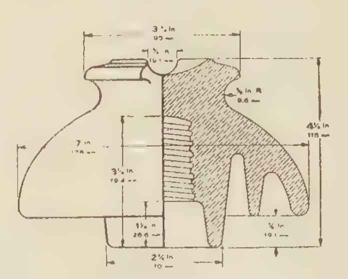
Nominal Rating.........volts	17500
Dry Flash-Over Voltage......	75000
Wet Flash-Over Voltage......	45000
Leakage Distance..........in.	9½
Dry Arcing Distance.......in.	5¼
Mechanical Strength......lbs.	4000
Min. Pin Ht. Recommended.in.	5
No. per Barrel...............	65
Gross Weight per 100.....lbs.	400

No. 1178—1-Inch Pin Hole
No. 1179—1⅜-Inch Pin Hole



Nominal Rating..............................volts	20000
Dry Flash-Over Voltage..............................	85000
Wet Flash-Over Voltage..............................	50000
Leakage Distance..............................inches	9
Dry Arcing Distance..............................inches	6
Mechanical Strength..............................pounds	4000
Minimum Pin Height Recommended........inches	5
No. per Barrel..............................	50
Gross Weight per 100..............................pounds	410

No. 1157—1-Inch Pin Hole
No. 1158—1⅜-Inch Pin Hole



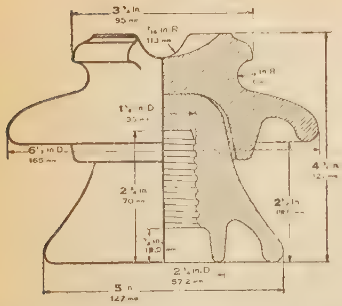
Nominal Rating..............................volts	23000
Dry Flash-Over Voltage..............................	88000
Wet Flash-Over Voltage..............................	50000
Leakage Distance..............................inches	11¾
Dry Arcing Distance..............................inches	6½
Mechanical Strength..............................pounds	4000
Minimum Pin Height Recommended.........inches	6
No. per Barrel..............................	40
Gross Weight per 100..............................pounds	615

Electrical values given here are based on tests conducted in accordance with A. I. E. E. Specifications No. 41.

Thomas Porcelain 2 and 3-Part Insulators

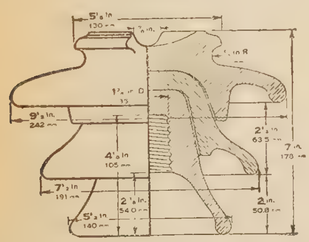
Brown Glaze

No. 2120



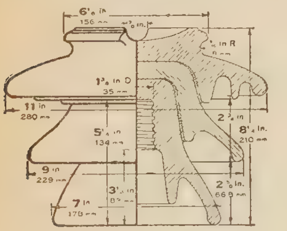
Threaded Pin Hole	No.	2120
Nominal Rating	kv.	23
Dry Flash-Over Voltage	kv.	87
Wet Flash-Over Voltage	kv.	55
Leakage Distance	in.	10½
Dry Arcing Distance	in.	6
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	5¼
No. in Barrel		30
Gross Weight per 100	lbs.	630

No. 3064



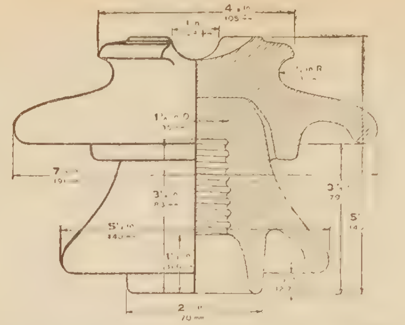
Threaded Pin Hole	No.	3064
Metal Shell Thimble	No.	3064-M
Sanded Pin Hole	No.	3064-S
Nominal Rating	kv.	40
Dry Flash-Over Voltage	kv.	130
Wet Flash-Over Voltage	kv.	85
Leakage Distance	in.	19¾
Dry Arcing Distance	in.	10¼
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	7½
No. in Crate		6
Gross Weight per 100	lbs.	1475

No. 3055



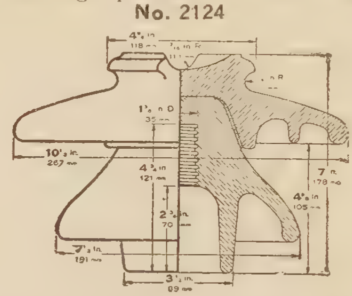
Threaded Pin Hole	No.	3055
Metal Shell Thimble	No.	3055-M
Sanded Pin Hole	No.	3055-S
Nominal Rating	kv.	50
Dry Flash-Over Voltage	kv.	150
Wet Flash-Over Voltage	kv.	100
Leakage Distance	in.	25¼
Dry Arcing Distance	in.	12¼
Mechanical Strength	lbs.	3500
Min. Pin Ht. Recommended	in.	9
No. in Crate		3
Gross Weight per 100	lbs.	2670

No. 2117



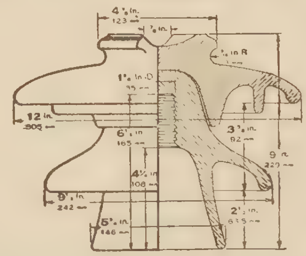
Threaded Pin Hole	No.	2117
Metal Shell Thimble	No.	2117-M
Sanded Pin Hole	No.	2117-S
Nominal Rating	kv.	27
Dry Flash-Over Voltage	kv.	95
Wet Flash-Over Voltage	kv.	65
Leakage Distance	in.	12½
Dry Arcing Distance	in.	7¾
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	5¾
No. in Barrel		25
Gross Weight per 100	lbs.	800

No. 2124



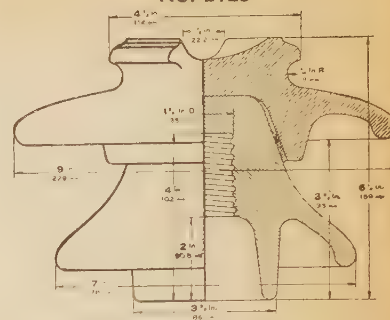
Threaded Pin Hole	No.	2124
Metal Shell Thimble	No.	2124-M
Sanded Pin Hole	No.	2124-S
Nominal Rating	kv.	45
Dry Flash-Over Voltage	kv.	140
Wet Flash-Over Voltage	kv.	90
Leakage Distance	in.	21¼
Dry Arcing Distance	in.	11
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	8
No. in Crate		6
Gross Weight per 100	lbs.	1670

No. 2126



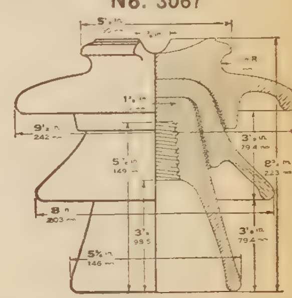
Threaded Pin Hole	No.	2126
Metal Shell Thimble	No.	2126-M
Sanded Pin Hole	No.	2126-S
Nominal Rating	kv.	55
Dry Flash-Over Voltage	kv.	150
Wet Flash-Over Voltage	kv.	105
Leakage Distance	in.	27½
Dry Arcing Distance	in.	14
Mechanical Strength	lbs.	3500
Min. Pin Ht. Recommended	in.	10
No. in Crate		3
Gross Weight per 100	lbs.	2670

No. 2125



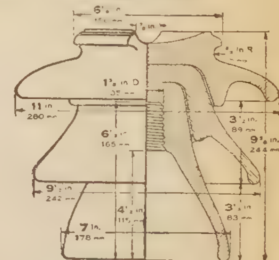
Threaded Pin Hole	No.	2125
Metal Shell Thimble	No.	2125-M
Sanded Pin Hole	No.	2125-S
Nominal Rating	kv.	35
Dry Flash-Over Voltage	kv.	115
Wet Flash-Over Voltage	kv.	75
Leakage Distance	in.	16½
Dry Arcing Distance	in.	9
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	7
No. in Crate		12
Gross Weight per 100	lbs.	1200

No. 3067



Threaded Pin Hole	No.	3067
Metal Shell Thimble	No.	3067-M
Sanded Pin Hole	No.	3067-S
Nominal Rating	kv.	45
Dry Flash-Over Voltage	kv.	145
Wet Flash-Over Voltage	kv.	95
Leakage Distance	in.	22¼
Dry Arcing Distance	in.	12
Mechanical Strength	lbs.	3000
Min. Pin Ht. Recommended	in.	9½
No. in Crate		6
Gross Weight per 100	lbs.	2080

No. 3066



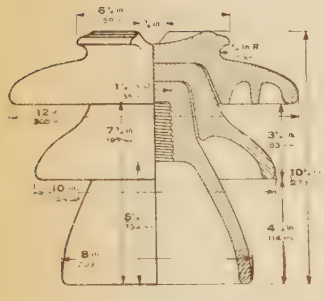
Threaded Pin Hole	No.	3066
Metal Shell Thimble	No.	3066-M
Sanded Pin Hole	No.	3066-S
Nominal Rating	kv.	55
Dry Flash-Over Voltage	kv.	155
Wet Flash-Over Voltage	kv.	110
Leakage Distance	in.	26
Dry Arcing Distance	in.	13⅜
Mechanical Strength	lbs.	3500
Min. Pin Ht. Recommended	in.	11
No. in Crate		3
Gross Weight per 100	lbs.	2450

Electrical values given are based on tests conducted in accordance with A. I. E. E. Specifications No. 41.

Thomas Porcelain 3 and 4-Part Insulators

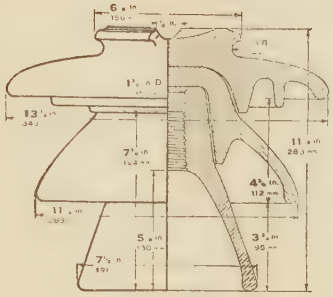
Brown Glaze

No. 3065



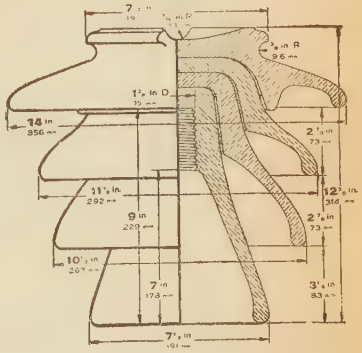
Threaded Pin Hole	No.	**3065**
Metal Shell Thimble	No.	**3065M**
Sanded Pin Hole	No.	**3065S**
Nominal Rating	kv.	60
Dry Flash-Over Voltage	kv.	175
Wet Flash-Over Voltage	kv.	120
Leakage Distance	in.	30¼
Dry Arcing Distance	in.	15½
Mechanical Strength	lbs.	3500
Minimum Pin Height Recommended	in.	12
No. in Crate		3
Gross Weight per 100	lbs.	3210

No. 3060



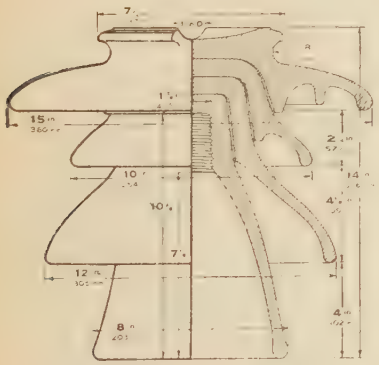
Threaded Pin Hole	No.	**3060**
Metal Shell Thimble	No.	**3060M**
Sanded Pin Hole	No.	**3060S**
Nominal Rating	kv.	66
Dry Flash-Over Voltage	kv.	185
Wet Flash-Over Voltage	kv.	135
Leakage Distance	in.	34
Dry Arcing Distance	in.	16½
Mechanical Strength	lbs.	3500
Minimum Pin Height Recommended	in.	12
No. in Crate		3
Gross Weight per 100	lbs	3865

No. 4038



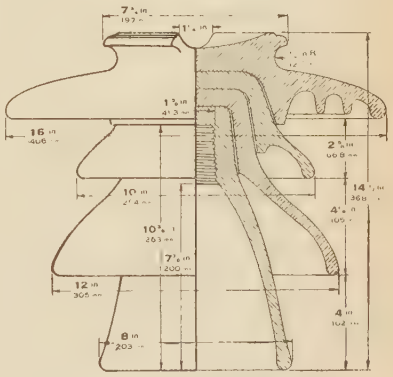
Threaded Pin Hole	No.	**4038**
Metal Shell Thimble	No.	**4038M**
Sanded Pin Hole	No.	**4038S**
Nominal Rating	kv.	70
Dry Flash-Over Voltage	kv.	195
Wet Flash-Over Voltage	kv.	140
Leakage Distance	in.	41¼
Dry Arcing Distance	in.	17¼
Mechanical Strength	lbs.	4000
Minimum Pin Height Recommended	in.	13½
No. in Crate		3
Gross Weight per 100	lbs.	5150

No. 4039



Threaded Pin Hole	No.	**4039**
Metal Shell Thimble	No.	**4039M**
Sanded Pin Hole	No.	**4039S**
Nominal Rating	kv.	80
Dry Flash-Over Voltage	kv.	200
Wet Flash-Over Voltage	kv.	150
Leakage Distance	in.	47
Dry Arcing Distance	in.	19½
Mechanical Strength	lbs.	4000
Minimum Pin Height Recommended	in.	15
No. in Crate		2
Gross Weight per 100	lbs.	5410

No. 4040

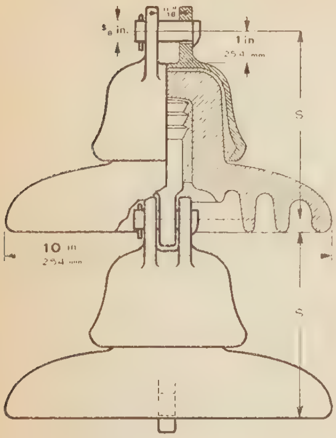


Threaded Pin Hole	No.	**4040**
Metal Shell Thimble	No.	**4040M**
Sanded Pin Hole	No.	**4040S**
Nominal Rating	kv.	88
Dry Flash-Over Voltage	kv.	210
Wet Flash-Over Voltage	kv.	160
Leakage Distance	in.	48½
Dry Arcing Distance	in.	20½
Mechanical Strength	lbs.	4000
Minimum Pin Height Recommended	in.	15½
No. in Crate		2
Gross Weight per 100	lbs.	6030

Electrical values given here are based on tests conducted in accordance with A. I. E. E. Specifications No. 41.

Thomas Porcelain Suspension Strain Insulators

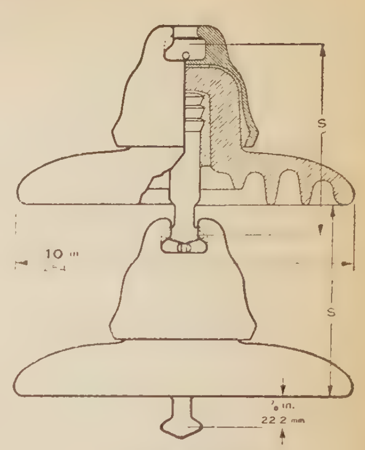
Brown Glaze



2-Unit Assembly
25000-Lb. Rating
Clevis Type

Cat. No.	Diam. In.	Spacing In. (S)	Type	Avge. M & E Lbs.	Leakage Dist. In.	Dry Arc. Dist. In.	Approx. Gross Wt. Lbs. Each
1209	12	7	Clevis	40000	10¾	7	23
1210	10	7	Clevis	36000	11⅞	7¼	19
1165A	10	6	Clevis	33000	11⅞	7¼	18
1192A	10	6	Ball-Socket	33000	11⅞	7¼	18
1166A	10	5¾	Clevis	25000	13	7¾	14½
1191A	10	5¾	Ball-Socket	25000	13	7¾	14½
1236	10	5½	Ball-Socket	25000	13	7¾	14
1187A	10	5⅜	Ball-Socket	25000	13	7¾	14
1238A	10	5¾	Clevis	15000	12	7¾	12½
1243A	10	5¾	Ball-Socket	15000	12	7¾	12½
1242A	10	5½	Ball-Socket	15000	12	7¾	12½
13209A	10	5½	Clevis	15000	12	7¾	12½
1237A	10	5⅜	Clevis	15000	12	7¾	12½
1241A	10	5⅜	Ball-Socket	15000	12	7¾	12½
1240A	10	5⅛	Ball-Socket	15000	12	7¾	12½
1239A	10	5	Ball-Socket	15000	12	7¾	12½
1242A	10	4¾	Ball-Socket	15000	12	7¾	12½

Weights are based on standard packing of 6 per crate; however, will pack to suit customer.



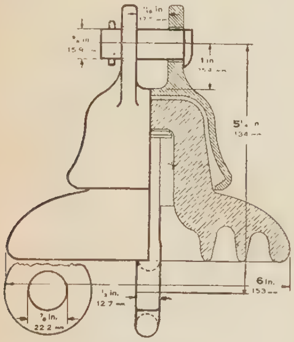
2-Unit Assembly
15000-Lb. Rating
Ball-Socket Type

Dry Flash-Over, KV. (10-Inch Diameter Units)

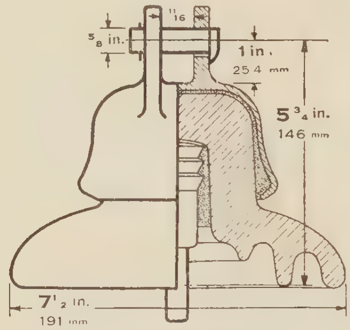
No. of Units	1	2	3	4	5	6	7	8	9	10	11	12
7-Inch Spacing (S)....kv.	75	145	210	...	...	...	...	...	...	...	...	...
6-Inch Spacing (S)....kv.	80	145	205	255	305	355	405	455	505	555	605	655
5¾-Inch Spacing (S)....kv.	85	148	204	255	303	351	400	448	496	545	593	641
5½-Inch Spacing (S)....kv.	85	145	200	250	295	345	395	440	485	530	575	620
5⅜-Inch Spacing (S)....kv.	85	144	196	245	290	335	380	425	470	515	560	605
5⅛-Inch Spacing (S)....kv.	85	140	190	235	280	325	370	410	455	495	540	580
5-Inch Spacing (S)....kv.	85	138	188	235	280	320	360	405	445	490	530	570
4¾-Inch Spacing (S)....kv.	85	135	185	230	270	310	350	390	430	470	510	550

Wet Flash-Over, KV. (10-Inch Diameter Units)

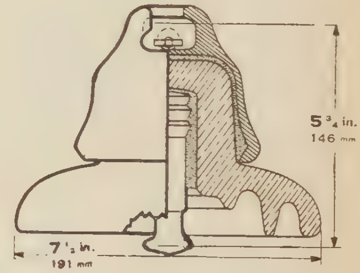
No. of Units	1	2	3	4	5	6	7	8	9	10	11	12
7-Inch Spacing (S)....kv.	40	85	130	...	...	...	...	...	...	...	...	...
6-Inch Spacing (S)....kv.	45	88	130	172	215	255	297	340	380	423	465	505
5¾-Inch Spacing (S)....kv.	50	90	130	170	210	250	290	330	370	410	450	490
5½-Inch Spacing (S)....kv.	50	90	130	170	205	245	280	320	360	400	440	475
5⅜-Inch Spacing (S)....kv.	50	88	130	165	203	242	280	318	356	395	434	472
5⅛-Inch Spacing (S)....kv.	50	85	130	165	200	235	265	300	335	370	410	445
5-Inch Spacing (S)....kv.	50	85	125	160	195	230	260	295	330	365	400	435
4¾-Inch Spacing (S)....kv.	50	85	120	155	190	220	255	285	320	355	390	420



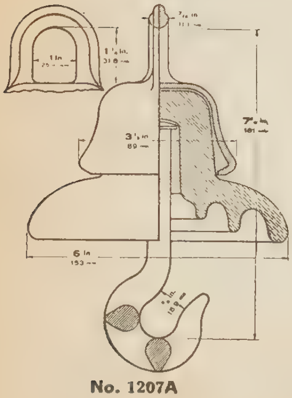
No. 1204A



No. 1199B



No. 1213A



No. 1207A

Cat. No.	Diameter Inches	Spacing Inches	Type	Average M & E Pounds	Leakage Distance Inches	Dry Arc. Distance Inches	Gross Wt., Lbs. Each
1199B	7½	5¾	Clevis	15000	8¼	5	11
1213A	7½	5¾	Ball-Socket	15000	8¼	5	11
1204A	6	5¼	Clevis-Eye	10000	6½	4⅜	6
1207A	6	7½	Loop-Hook	10000	6¼	4¼	6

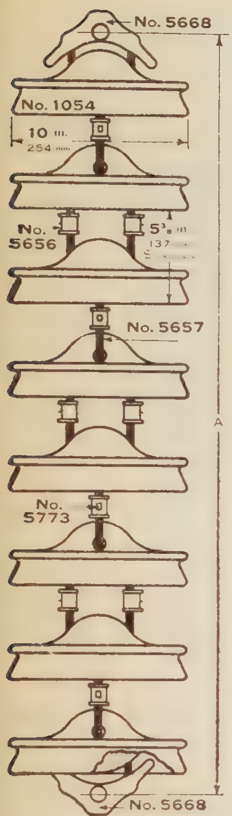
Cat. No.	Dry Flash-Over, KV. No. of Units 1	2	3	Wet Flash-Over, KV. No. of Units 1	2	3
1199B	70	120	165	40	70	110
1213A	70	120	165	40	70	110
1204A	60	100	135	30	60	85
1207A	60	100	135	30	60	85

Electrical and mechanical values given here are based on tests conducted in accordance with A. I. E. E. Specifications No. 41.

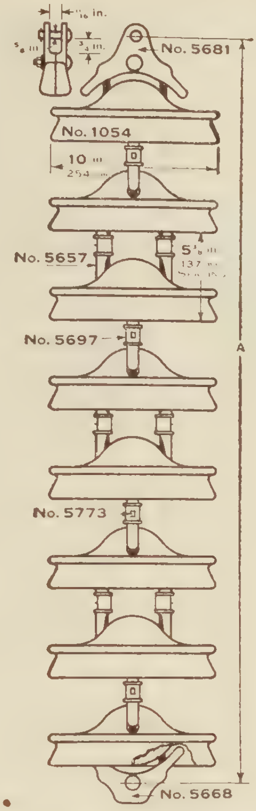
Thomas Link Type Hewlett Insulators

10-Inch Standard Units

Brown Glaze—Average M & E 10000 Pounds



No. 11069-T8



No. 11072-T8

Any number of units (1054) may be assembled on a ⅝-inch spacing by means of soft drawn copper links (5657), cast bronze couplers (5656 or 5697), phosphor bronze spring clips (5773); the end terminals or adapters are of forged steel, either blind (5668) or clevis (5681) type.

Cat. No. 11069 Assembly has a blind adapter at top and bottom.

Cat. No. 11070 Assembly has a clevis adapter at the top and blind adapter at the bottom.

Cat. No. 11071 Assembly is similar to Cat. No. 11069 except has wing couplers (5697).

Cat. No. 11072 Assembly is similar to Cat. No. 11070 except has wing couplers.

No. Units	Dimension A, In. 11069 11071	Dimension A, In. 11070 11072	Flash-Over, Kv. Dry	Flash-Over, Kv. Wet	Gross Wt., Lbs. 11069 11070	Gross Wt., Lbs. 11071 11072
Type 1	5⅞	7½	75	45	19½	19½
Type 2	11¼	12⅞	145	90	32½	33
Type 3	16⅝	18¼	205	135	50	51
Type 4	22	23⅝	250	170	65	66½
Type 5	27⅜	29	300	205	80	82
Type 6	32¾	34⅜	350	240	95	97½
Type 7	38⅛	39¾	390	275	110	113
Type 8	43½	45⅛	430	310	125	128½
Type 9	48⅞	50½	470	345	140	144
Type 10	54¼	55⅞	510	375	155	159½
Type 11	58⅝	61¼	550	410	170	175
Type 12	65	66⅝	590	445	190	195½

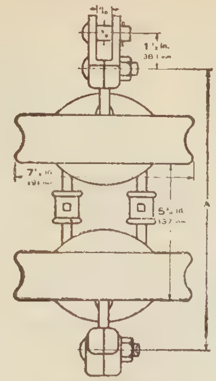
Electrical and mechanical values are based on tests conducted in accordance with A. I. E. E. Specifications No. 41.

Bulletins and Complete Information on

Hardware for High Voltage Insulators

Furnished on Application

Thomas Link Type Hewlett Insulators



No. 11074-T2

7½-Inch Units

Brown Glaze
Average M & E 8000 Pounds

Cat. No. 11073 Assembly has a blind adapter at both terminal ends.

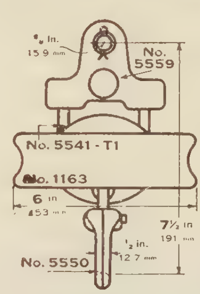
Cat. No. 11074 Assembly has a clevis at one end and a blind adapter at the other terminal.

Cat. No. 11075 Assembly has a clevis adapter at both terminal ends.

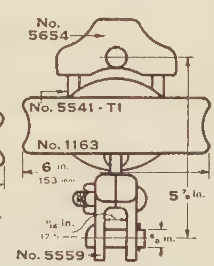
No. Units	Dimension A, In. 11073	Dimension A, In. 11074	Dimension A, In. 11075	Flash-Over, Kv. Dry	Flash-Over, Kv. Wet	Gross Wt., Lbs.
Type 1	5¾	7¼	8¾	75	45	13¼
Type 2	11⅛	12⅝	14⅛	130	90	26¾
Type 3	16½	18	19½	185	135	38½

6-Inch Units

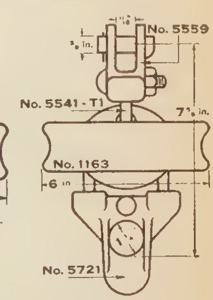
Brown Glaze—Average M & E 6000 Pounds



No. 11031-T1



No. 11064-T1



No. 11077-T1

Cat. No. 11026 Assembly has large eye (5550) at both terminal ends.

Cat. No. 11031 Assembly has a large eye (5550) at one end and a clevis (5559) at the other terminal.

Cat. No. 11032 Assembly has a clevis (5559) at both terminal ends.

Cat. No, 11062 Assembly has a blind adapter (5654) at both terminal ends.

Cat. No. 11063 Assembly has a blind adapter (5654) at one end and a large eye (5550) at the other terminal.

Cat. No. 11064 Assembly has a clevis (5559) at one end and a blind adapter (5654) at the other terminal.

Cat. No. 11077 Assembly has a clevis (5559) at one end and thimble adapter (5721) at the other terminal.

Cat. No. 11078 Assembly has a large eye (5550) at one end and thimble adapter (5721) at the other terminal.

Cat. No. 11079 Assembly has a blind adapter (5654) at one end and thimble adapter (5721) at the other terminal.

Cat. No. 11080 Assembly has a thimble adapter (5721) at both terminal ends.

Cat. No.	String, Inches 1-Unit	String, Inches 2-Units	Flash-Over, Kv. 1-Unit Dry	Flash-Over, Kv. 1-Unit Wet	Flash-Over, Kv. 2-Units Dry	Flash-Over, Kv. 2-Units Wet	Gross Wt., Lbs. 1-Unit	Gross Wt., Lbs. 2-Units
11026	7 13/16	12 3/16	70	40	120	75	7½	13¼
11031	7½	11⅞	70	40	120	75	7½	13¼
11032	7 3/16	11 9/16	70	40	120	75	7½	13¼
11062	4 9/16	8 15/16	70	40	120	75	7½	13¼
11063	6 3/16	10 9/16	70	40	120	75	7½	13¼
11064	5⅞	10¼	70	40	120	75	7½	13¼
11077	7⅝	12	70	40	120	75	7½	13¼
11078	7 15/16	12 5/16	70	40	120	75	7½	13¼
11079	6 5/16	10 11/16	70	40	120	75	7½	13¼
11080	8¼	12⅝	70	40	120	75	7½	13¼

Electrical and mechanical values are based on tests conducted in accordance with A. I. E. E. Specifications No. 41.

Kiley Truck Bodies

Type GU General Utility Bodies

For Mounting on Any ½-Ton Commercial Chassis

A new design in light duty line, meter installation, trouble shooter or general utility body. Made of special pressed steel construction, which insures strength and light weight, this unit has replaced, in some instances, 1½-ton units with satisfactory operation.

The body complete weighs less than 500 pounds.

The unit consists of:

Two side cabinets, 9x28x60 inches, with full size metal doors opening to outside of body.

The right cabinet is regularly equipped with two adjustable partition trays and eight permanent compartments, while the rear section contains complete set of tool holders for all standard line tools.

Left side cabinet contains no standard equipment; may be arranged for electric meter trays, test meters, etc.

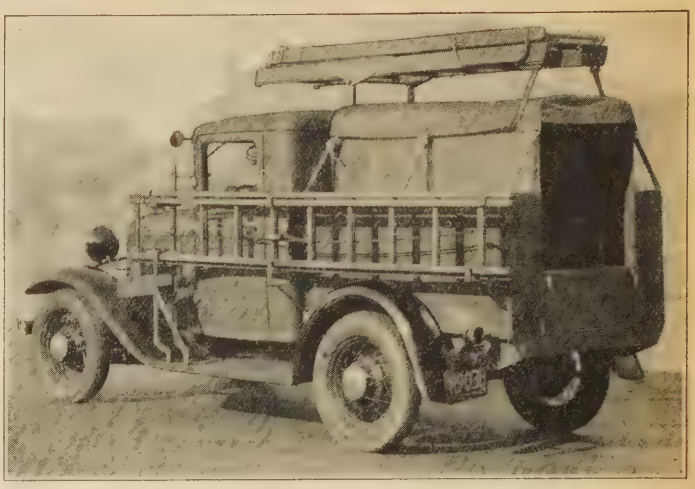
The center loading space, 28x60 inches, can be readily used in emergency work for carrying reels, transformers, or in general use for carrying electric refrigerators, etc.

The floor of this body is about 26 inches above ground.

Tailgate—all steel construction—slam type.

Tarpaulin—heavy waterproof cover with spring steel tarpaulin bows securely fastened in same.

Ladder irons conform to latest approved method for carrying ladders. The ladder rests on the lower rail and is steadied by bracket under top rail. A spring clamp is provided to hold ladder securely yet it is readily dismounted.



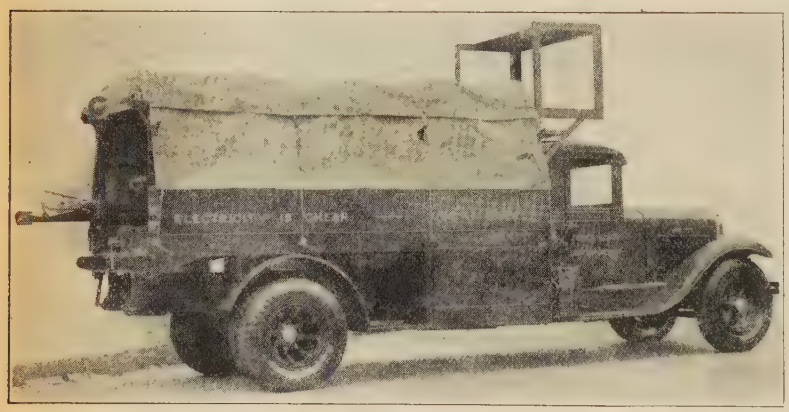
The lower section of ladder brackets provides space for sectional tree trimmers, lamp pickers, or ground rods. Write for details.

Standard Line Construction Bodies

A special line construction body which is light and durable. The cabinets, compartments, and equipment have been modified for power company use. The bodies can be supplied of all metal construction if desired.

Standard body consists of:

Oak floor platform, protected by steel plates bolted securely to pressed steel bearers.



Rear-I-Beam so arranged that winch and derrick equipment could be added in future if necessity demanded it. Information regarding equipment necessary for use with winch and derrick furnished upon application.

Heavy rear fenders.

Rear steps.

Upper side boxes on right and left with full set of tool holders and material compartments. The material bins for small goods are made adjustable to meet variable requirements. Covers have continuous steel hinges with ¼-inch steel pin.

Lower side boxes on right and left.

Thru cant hook box with doors on each side of body.

Weatherproof rubber goods cabinet with doors on each side of body.

Digging bar box.

Overhead structure complete with racks for ladder, pike poles, material chains, snatch block rail, straps, etc.

Top bows and bow carrier.

Formed 3-piece tarpaulin with stationary bellows type section between cab and body.

Tarpaulin carrier.

Standard body sizes, 8′6″, 10 and 12 feet.

Type LI Standard Installation Bodies

For maintenance and troubleman's service.

Body, size 60x46x28 inches, consists of:

Front compartment, size 46x25½x28 inches, has large door opening on right side and one horizontal and one vertical partition.

Rear compartment, size 46x34½x28 inches, has double rear door opening.

Right section rear has two stationary shelves and five sliding trays.

Left section rear has one horizontal and one vertical partition.

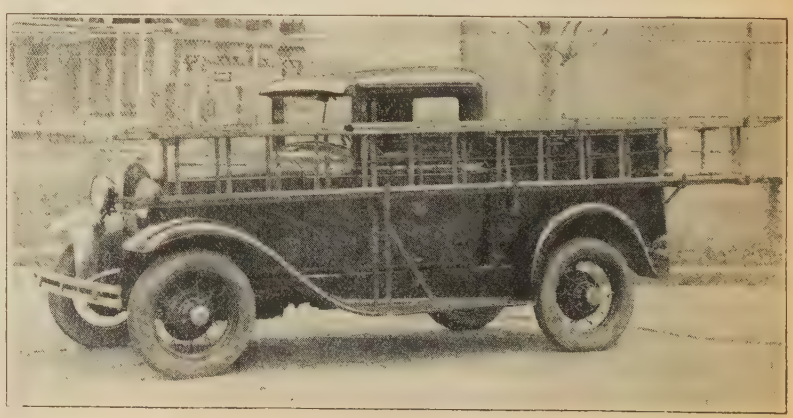
Rear doors contain racks for tools and insulator tubes.

This unit has an all steel under body.

A complete set of ladder irons, including ladder clamp and rack, is mounted on left side.

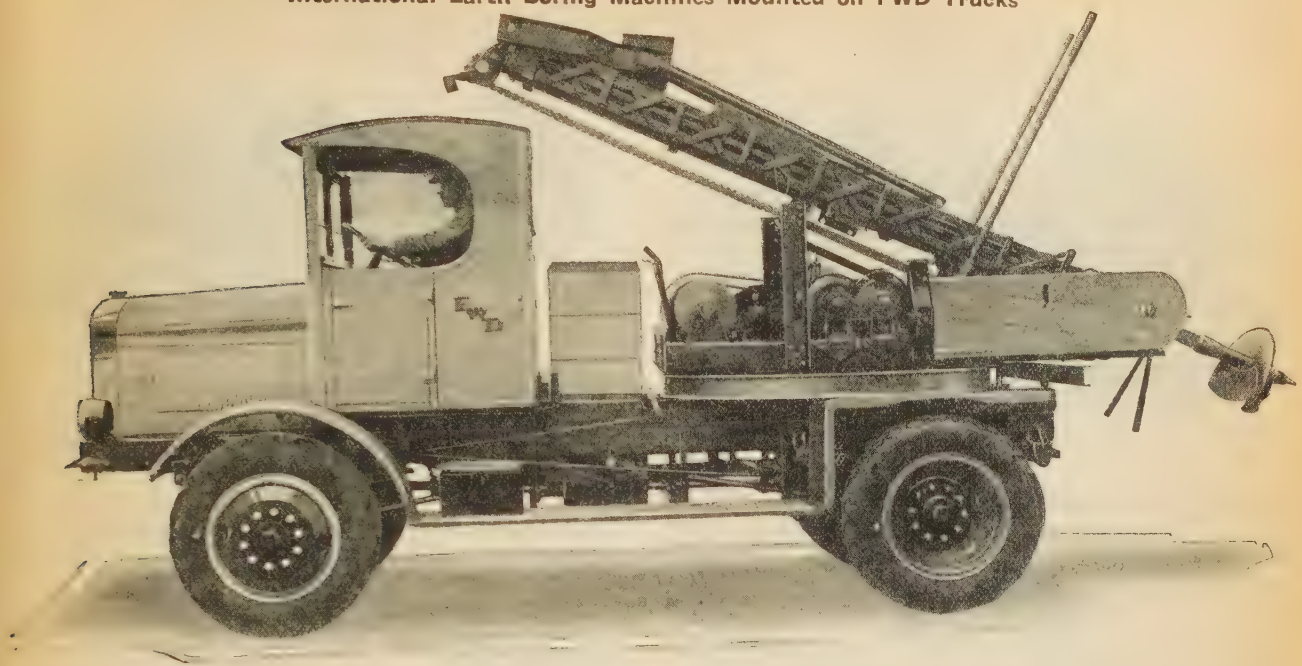
Can be mounted on any ½-ton commercial chassis.

It can be modified and equipped for almost any special service.



Graybar Earth Boring Equipment

International Earth Boring Machines Mounted on FWD Trucks



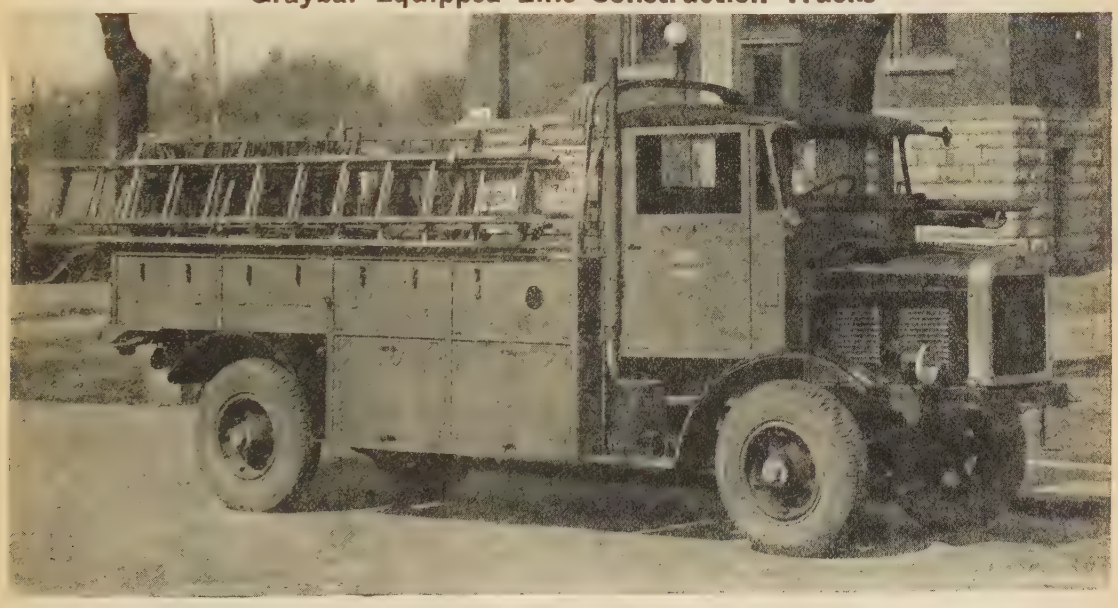
The truck used to haul the International Earth Boring Machine is a 3½-4-ton FWD. This truck is powered on all four wheels. Superior traction enables it to reach places which would otherwise be inaccessible.

Under favorable conditions, the boring machine will bore a 24-inch hole 7 feet in 2 minutes. Under average conditions holes can be bored and poles set in them at an average of 60 per 8-hour day. Machine is mounted on a turntable.

The Central Station Type Machine is equipped with one 24-inch and one 30-inch auger and a 9-foot tower. It bores holes 10 feet deep on absolutely level ground. Sets poles up to 65 feet in length. Total weight, 15,000 pounds.

Telephone Type Machine is equipped with 6-foot tower and will bore 7-foot holes on absolutely level ground. Sets poles up to 35 feet in length. Augers furnished are one 20-inch and one 24-inch. Total weight, 14,300 pounds.

Graybar Equipped Line Construction Trucks



The Enclosed Gear Boring Machine is mounted on the FWD Line Construction Truck, which has a wide range of speeds, 7 forward and 2 in reverse. The boring machine is readily detachable from the truck body.

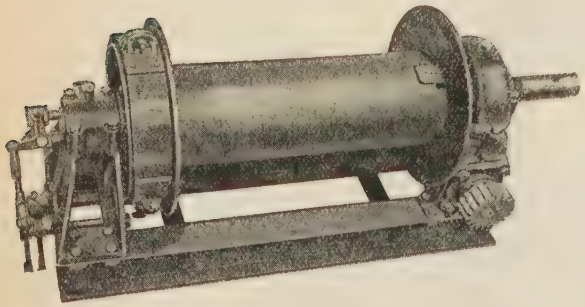
This machine will bore any pole hole and set the pole in any location where hand digging is possible and where it is at all practicable to place a truck. Power is delivered to the boring machine by a special transmission counter shaft which permits full engine torque and the use of any desired speed of the truck transmission for every phase of boring machine operation.

The earth auger with its standard 13-foot rack will dig a 6-foot hole anywhere and on strictly level ground a 7-foot hole. One 20-inch and one 24-inch auger are supplied as standard equipment.

There are two models of Enclosed Gear Boring Machines: the Model C for the usual light work, and the Model HC, which is used for heavy work.

No. 1233 Graybar Single Drum Winches

10,000-Pound Capacity



This standard Graybar Single Drum Winch is an exceptionally flexible unit. It is equipped with a positive 3-jaw type clutch. When the clutch is disengaged, the winch drum rotates freely. For certain kinds of work this feature is very valuable.

A heavy manually operated brake is provided as an added safety. However, inasmuch as the winch is irreversible, the brake is seldom used.

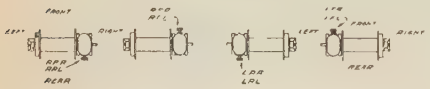
This winch is furnished with a 23-inch drum which has a capacity of 1400 feet of 7/16-inch rope. The pulling capacity is 10,000 pounds.

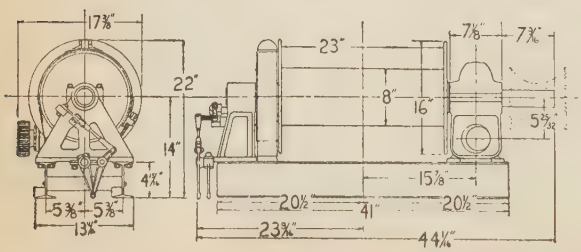
The arrangement of the driving sprockets is provided to suit the user's needs. They are furnished on right or left hand sides, front or rear.

Intermittent Capacity, Single Line.....pounds	10,000
Continuance Capacity, Single Line.....pounds	5,000
Diameter of Drum.....inches	8
Diameter of Flange.....inches	16
Length of Drum, Inside.....inches	23
Approximate Space Required Back of Cab...inches	20
Weight, Winch Only.....pounds	530
Approximate Weight, with SAE Power Take-Off .....pounds	675
Approximate Weight, with Propeller Shaft Power Take-Off.....pounds	825

Rope and Cable Capacity

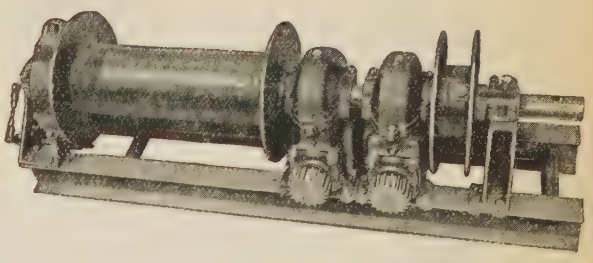
Size.....in.	3/8	7/16	1/2	5/8	3/4	1
Material.....	Steel	Steel	Steel	Steel	Manila	Manila
No. of Feet..	2047	1400	1150	736	506	300





Nos. 1292 and 1355 Graybar Double Drum Winches

10,000-Pound Capacity



No. 1292 (Type WD-300) is similar to No. 1233 Winch but it is equipped with an independently operated smaller winch drum. The 23-inch drum, which has a rope capacity of 1400 feet of 7/16-inch cable, is equipped with a clutch and brake. This drum will rotate as a free spool by disengaging the clutch.

The small independent drum is 4 inches wide and has a capacity of 240 feet of 7/16-inch cable. This smaller drum has no clutch or brake. A 6-inch drum with capacity of 360 feet of 7/16-inch cable is furnished at a slight additional cost.

Drive sprockets are furnished on front or rear side of winch, as desired.

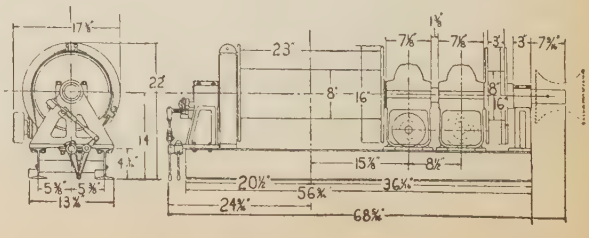
The No. 1355 Winch (Type WD-235) is identical in construction to No. 1292, except the smaller drum is 6 inches wide and has a rope capacity of 360 feet of 7/16-inch cable. Also the worm housing and drive sprocket of the 23-inch drum is located on the left hand side rather than on the right hand side of the winch. Drive sprockets are furnished on front or rear side of winch, as desired.

The shaft extending beyond the bearing supports on the right usually carries a nigger-head or collapsible wire reel. Additional nigger-heads are not usually furnished with double-drum winches, but can be so equipped if desired.

Intermittent Capacity, Single Line.....pounds	10,000
Continuance Capacity, Single Line.....pounds	5,000
Diameter of Drums.....inches	8
Diameter of Flange.....inches	16
Approximate Space Required Back of Cab...inches	20
Weight, Winch Only, with 4-Inch Drum.....pounds	800
Approximate Weight, with Propeller Shaft Power Take-Off.....pounds	1200

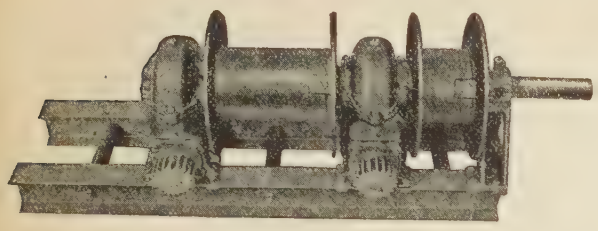
Rope and Cable Capacities

Size Rope Inches	Kind of Material	23-Inch Drum	No. of Feet 4-Inch Drum	No. of Feet 6-Inch Drum
1/4	Steel	4600	800	1200
5/16	Steel	3323	578	867
3/8	Steel	2047	356	534
7/16	Steel	1400	240	360
1/2	Steel	1150	200	300
9/16	Steel	950	164	244
5/8	Steel	736	128	192
3/4	Manila	506	88	132
1	Manila	300	52	78



No. 1227 Graybar Double Drum Winches

10,000-Pound Capacity



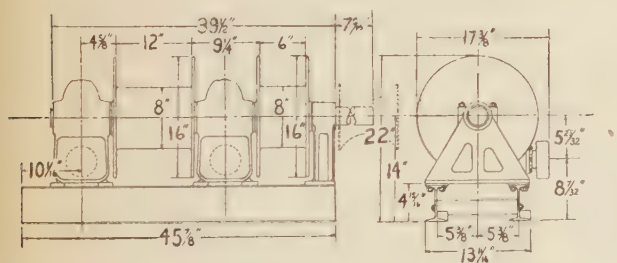
The No. 1227 Double Drum Winch (Type FD) offers the use of two independent winch drums. One drum can be used for raising the derrick and the other used for raising the pole. Neither brake nor clutch is used in this winch.

It is furnished with one 12-inch drum with a rope capacity of 720 feet of 7/16-inch cable, and one 6-inch drum with a capacity of 360 feet of cable. Other available drum combinations are one 12-inch and one 9-inch drum, and a combination of two 12-inch drums.

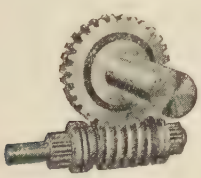
Intermittent Capacity, Single Line	pounds	10,000
Continuance Capacity, Single Line	pounds	5,000
Diameter of Drums	inches	8
Diameter of Flange	inches	16
Approximate Space Required Back of Cab	inches	20
Weight, Winch Only	pounds	653
Approximate Weight, with Propeller Shaft Power Take-Off	pounds	1000

Rope and Cable Capacities

Size Rope Inches	Kind of Material	No. of Feet 12-Inch Drum	9-Inch Drum	6-Inch Drum
1/4	Steel	2400	1800	1200
5/16	Steel	1734	1299	867
3/8	Steel	1068	801	534
7/16	Steel	720	540	360
1/2	Steel	600	450	300
9/16	Steel	492	370	244
5/8	Steel	384	288	192
3/4	Manila	264	198	132
1	Manila	156	117	78

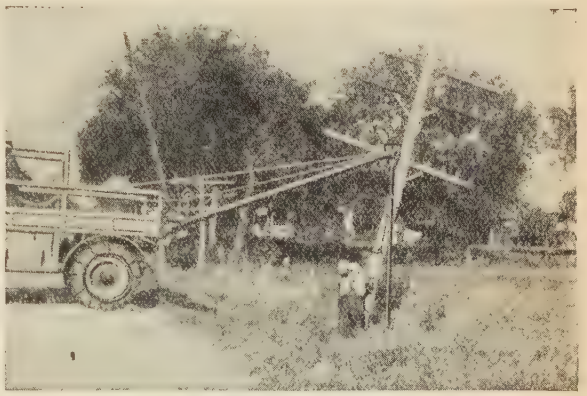


Worm Wheel



This is the heavy phosphor bronze worm wheel and special alloy hardened steel worm used in all Graybar Winches. The heavy-duty roller bearings carry the radial load, and the steel and bronze plain bearings carry the end thrust.

Graybar Utility Automobile Pole Derricks



Middle Type Derricks which are used for general derrick work, center over the middle of the rear of the trucks. Only two men are required to operate this type of derrick; one man operates the winch and the other guides the pole. The middle type derrick is raised and adjusted with the winch. When used as a stiff leg assembly an old pole may be removed from the ground without preliminary digging unless it is firmly embedded or has an abnormal flare. When not in use, the derrick may be disassembled and carried on the side of the truck body, where it is out of the way.

The Corner Type Derrick which works at the right rear corner of the truck body facilitates derrick work in alleys and other restricted places where it is not possible to use the middle type to good advantage. Operating characteristics are practically the same as the middle type.

A complete derrick assembly includes:

Derrick Proper
1 Right Hand Side Leg
1 Left-Hand Side Leg
1 Middle Leg, Upper Section
1 Middle Leg, Middle Section
1 Middle Leg, Lower Section
1 Apex, Pin Key, Snap and Chain
1 Floor Pocket Bolt
1 Foot Plate
2 Connecting Pins, Key, Snap and Chain
1 Rear Spindle and Sheave (Length to Suit Truck Body)
*1 Tail Bolt Assembly
*2 Front Supports for Spindle
*1 Floor Pocket
1 Winch Line Hook for End of Winch Line

*Designated as metal parts for attaching to truck body.

Type	Each	Lift Feet	†Handles Poles Length Feet	‡Weight Pound
XLM	....	17½	35	285
LM	....	20	45	385
HM	....	22½	55	570
LC	....	20	45	380
HC	....	22½	55	570
2870	....	28	70	750
T	....	21	45	595

†Length of poles handled depends on the balance point of each pole.

‡Weight does not include the weight of boxing nor body parts such as tail bolt assembly, spindle and sheave.

Adjustable Type

The standard types are provided with a foot piece for lower end of middle leg, which fixes the position of the derrick head and overhang at rear of truck.

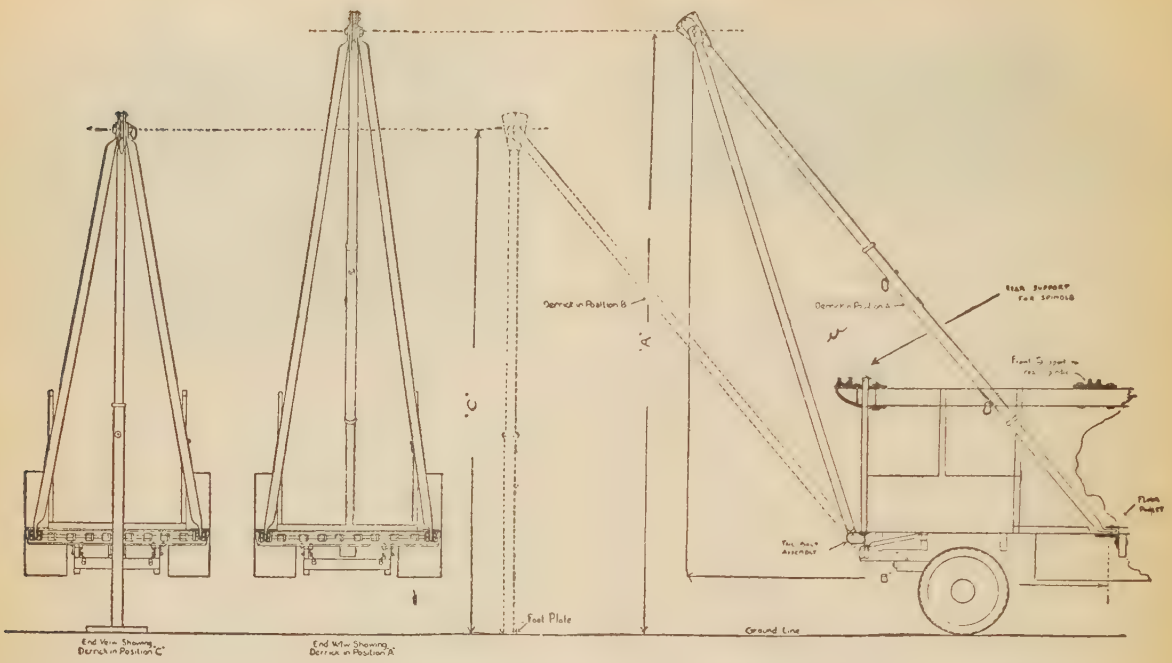
Many times a bank on which a pole is placed or to be placed, or a hedge or deep gutter has prevented the truck being so placed as to be of service.

The Adjustable Type Derrick can be changed from one extreme position to the other without the telescoping center leg becoming disengaged. All positions are fixed by the use of pins.

Adjustable Type.....each .....

Graybar Utility Automobile Pole Derricks

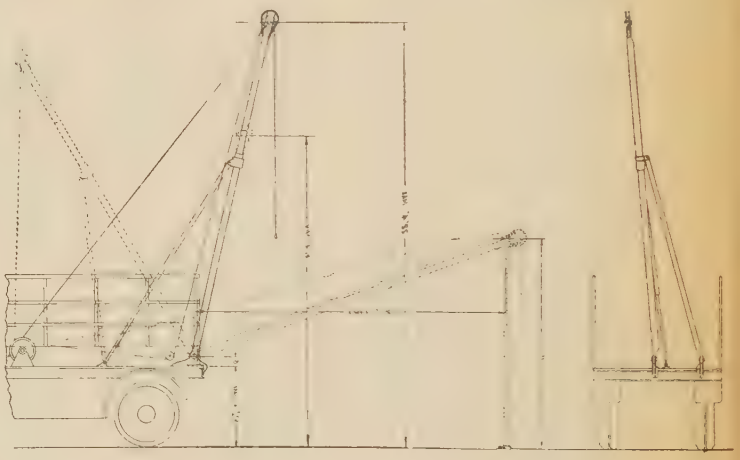
XLM, LM, HM and 2870 Types

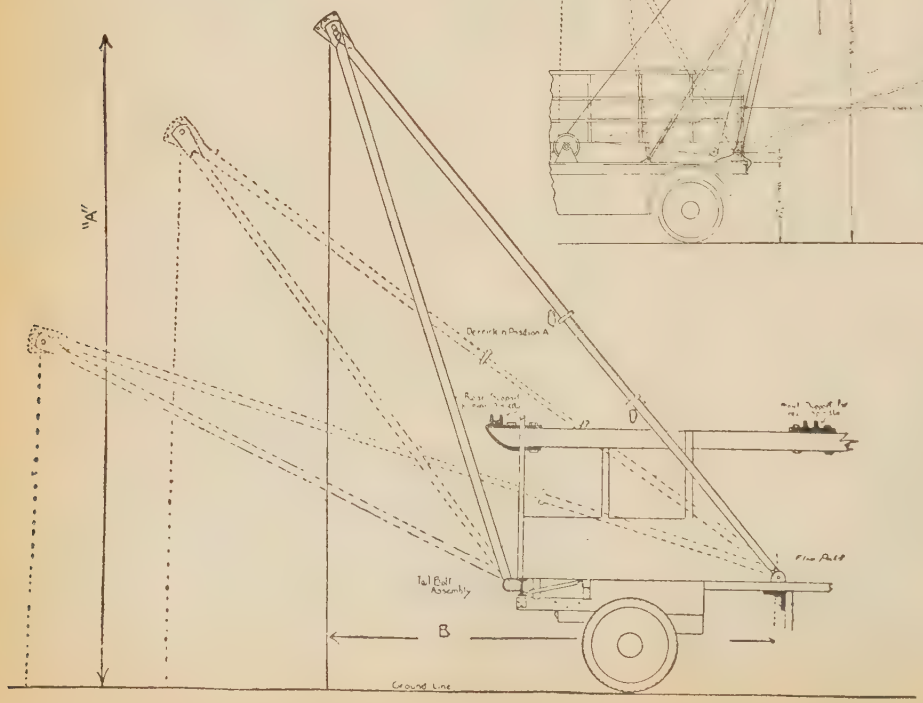


XLM Type	LM Type	HM Type	2870 Type
A=17 Feet 6 Inches	A=19 Feet 10 Inches	A=21 Feet 9 Inches	A=28 Feet
B=13 Feet 5 Inches	B=13 Feet	B=15 Feet	B=20 Feet
C=14 Feet 9 Inches	C=16 Feet 11 Inches	C=18 Feet 10 Inches	C=24 Feet

Adjustable Type (Below)
A=Same Maximum Height as Standard Derrick of Same Type and Is Variable Below That Dimension

B=Same as Standard Derrick and Varies with Position of Truck

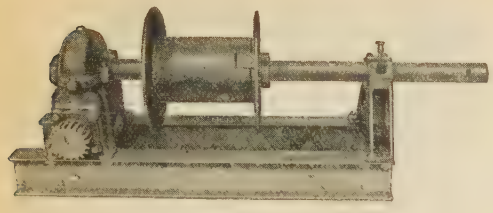




T Type (Above)
Has a Lift of 21 Feet
Handles Poles up to 45 Feet in Length
Weighs 595 Pounds

No. 1354 Graybar Single Drum Winches

10,000-Pound Capacity



The No. 1354 (Type L-12) Graybar Winch is a modification of the regular standard single drum winch and is used for every purpose which requires pulling rope on a drum, operating cranes, pole setting derricks and for hoisting and hauling. This type winch is particularly popular for use on light model trucks where the use of a large winch-drum is not required and not much space is available for mounting.

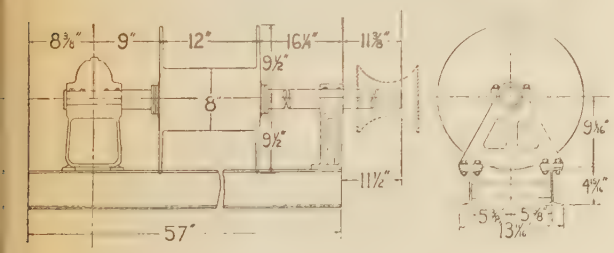
No brake nor clutch is required on this winch, for the winch cannot run free; the winch is driven when pulling and also when lowering.

This winch embodies all of the best features of the more expensive Graybar Winches. It is flexible, light in weight, and built for hard service. To keep the weight to a minimum and assure a greater factor of safety, only high grade heat treated alloy steels and electric steel castings are used in its construction.

Intermittent Capacity, Single Line.....pounds	10,000
Continuous Capacity, Single Line.....pounds	5,000
Diameter of Drum.....inches	8
Diameter of Drum Flange.....inches	19
Approximate Space Required Back of Cab...inches	20
Weight, Winch Only.....pounds	430
Approximate Weight, with SAE Power Take-Off .....pounds	480
Approximate Weight, with Propeller Shaft Power Take-Off.....pounds	730

Rope and Cable Capacity

Size.....in.	3/8	7/16	1/2	5/8	3/4	1
Material.....	Steel	Steel	Steel	Steel	Manila	Manila
No. of Feet....	1068	720	600	384	264	156



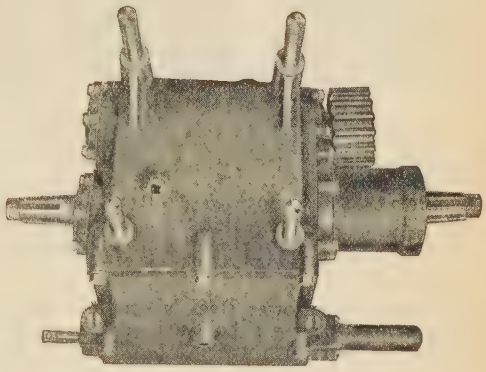
Niggerheads

Graybar Winches can be furnished with niggerheads on one or both sides. Simply by the use of a longer shaft and auxiliary supporting bearings, Graybar Winches can be equipped with niggerheads to meet practically every demand.

Standard niggerheads furnished are 8-inch; 12-inch niggerheads can also be furnished if desired.

Niggerheads are especially popular on the single drum models and are furnished at a slight additional cost. Ordinarily, when one niggerhead is wanted the standard winch is supplied with the niggerhead mounted on shaft extension, on right hand side. If desired, shafts long enough to place niggerheads beyond cab-line are furnished. In that case, out-board bearings are provided.

Type P Graybar Propeller Shaft Power Take-Off



This power take-off is installed back of the truck transmission and the power to the wheels passes through it, making it a part of the truck drive.

By means of a single shifting gear and a progressive shift shaft, the engine power may be delivered direct to the rear wheels or to the winch, or both at the same time.

Placing the power take-off back of the truck transmission permits the use of all the truck transmission speeds for operating the winch.

A reverse is provided in the power take-off, which has a slightly higher speed than the forward or pulling position. This feature adds to the cost of the power take-off, but in the long run is a good investment.

When the reverse in the truck transmission is depended on to lower the load, the operator usually races the engine, as the standard truck reverse is slower than any forward speed. Most reputable truck manufacturers list this practice under the Don't column, because of its destructive effects on the motor.

With the Graybar Propeller Shaft Power Take-Off, the operator selects the speed best adapted to the job, and then uses the power take-off reverse, which is always slightly faster.

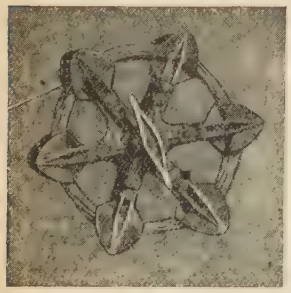
If this reverse were omitted, the operator would have to go through the selective gate of the transmission shaft lever and on some trucks release a reverse lock. With the Graybar Propeller Shaft Power Take-Off, the shift from forward to reverse is with one lever straight forward or back.

This feature is appreciated on a cable removing job where it is necessary to take a new grip every four to six feet, requiring a reversal of the winch each time.

This unit comprises a high quality of material and workmanship.

The gears are of chrome nickel steel carefully heat treated, and all shafts and gears are mounted on antifriction bearings.

Type CR Graybar Collapsible Power Reels



The Type CR Collapsible Power Reel is designed to pick up loose wire in a neat coil. It is light in weight, but sturdy in construction, and is attached to the winch in a short time. The reel arms and the spiders supporting them are made of aluminum alloy castings which insure light weight as well as strength. The spindle to which the spider is attached is made of seamless steel tubing fitted with a bayonet socket lock for attaching to the winch shaft.

The CR Collapsible Power Reel is simple in operation. All Graybar Winches have a hole drilled through the extended end of the shaft into which a pin is driven, leaving one end protruding from the shaft over which the reel spindle is pushed in place and locked by a quarter turn of the reel. The lever on the outside of the reel is turned to the right expanding reel to working position. When the wire is ready for removal, the lever is turned to the left, contracting the reel arms and allowing the wire to be taken off in a neat compact roll.

Graybar 3 to 7-Ton 2-Wheel Trailers

These trailers are equipped with extension tongues, which enable them to handle poles of any length. The tongue is fitted with a pintle eye, which fits into the pintle hook at the rear of the truck. It telescopes within itself to accommodate either long or short poles, and can be adjusted to balance the trailer for easy hand moving when the trailer is empty.

All trailers of this series are equipped with two stationary bolsters on which are sliding up-rights. These up-rights, which facilitate the proper placing of large or small loads on the trailer, are positively locked into position by quick acting cams. At the rear of the trailer is the small hand winch which is used for tightening the cable which binds the load.

Specifications

Model	**1370**	M	H	XH
Capacity....tons	2	3	5	7
Tread....in.	56	56	58	60
Standard Tires, Solids....in.	34x4	36x5	36x8	36x10
Pneumatic Tires, Extra....in.	32x6	36x8	38x9	.....
Dual Tires, Extra....in.	30x5	32x6	36x6	.....
Dual Tires, Extra....in.	....	36x6	38x9.75	.....
Width Overall....in.	70	72	80	82
Frame....in.	4	5	6	7
Springs....leaves	7	8	12	12
Width of Springs....in.	3½	3½	3½	4
Length of Springs....in.	43½	43½	43½	43½
Tongue Extension....ft.	10¼	11⅔	11⅔	11⅔
Weight....lbs.	1825	2145	2860	3850

Graybar Pole Dinkeys

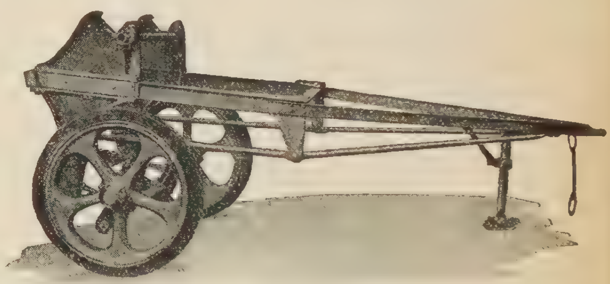
Pole dinkeys, Models C-1 and C-3 are constructed to stand the rough handling such a unit must necessarily receive. The bunks are faced with heavy steel strips and the woodwork is of well seasoned hard wood.

Specifications

Model	C-1	C-3	**1369**
Capacity....tons	1	3	½
Standard Tires, Solids....in.	34x3	32x5	....
Standard Tires, Balloons....in.	....	....	29x4.40
Pneumatic Tires, Extra....in.	30x5	36x8	....
Tread....in.	32	35	56
Width Overall....in.	44	46	68
Weight....lbs.	395	735	305

Models C-1 and C-3 have Timken taper roller bearings; Model 1369 has New Departure bearings.

Graybar Cable Reel Trailers



The Model D Cable Reel Trailer affords a means of quickly transporting reels of cable. It has the low center of gravity which is essential to safe transportation of heavy objects at high speed. When the trailer is uncoupled from the truck, the cable can be paid out from the reel without unloading from the trailer.

Specifications

Model	D	WD-1	WD-2
Capacity....tons	3	3	3
Size of Reel Handled....	34″x7′	38″x7′	48″x7′
Diameter of Reel Spindle....in.	2½	2½	2½
Tread....in.	64	68	78
Tires, Solids....in.	36x5	36x7	36x8
Width of Bolster....in.	68	72	82
Width Overall....in.	79	83	93
Size of Axle....in.	2¾x2¾	2¾x2¾	2¾x2¾
Weight....lbs.	2250	2330	2385

This unit has electric steel spoke wheels of integral hub type, Timken roller bearings, and special heat treated chrome vanadium steel springs. All castings are electric steel cast. Axle material is 40–45 carbon steel, especially heat treated. The main frame and cross member is a 4-inch, 9½-pound I-beam.

Graybar Combination Cable Reel and Pole Trailers

This trailer, as the name indicates, is one which can be used for hauling poles at one time and by making a change-over, it can be used for hauling cable reels. Through this combination there are really two trailers purchased at 50 per cent less than would have to be paid for separate cable reel and pole trailers.

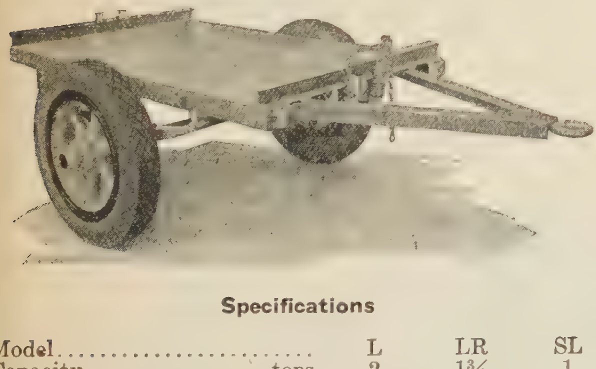
Specifications

Model	CP	WCP-1	WCP-2
Capacity....tons	3	3	3
Size of Reel Handled	34″x7′	38″x7′	48″x7′
Diameter of Reel Spindle....in.	2½	2½	2½
Tread....in.	64	68	78
Tires, Solids....in.	36x5	36x7	36x8
Width of Bolster....in.	68	72	82
Width Overall....in.	79	83	93
Size of Axle....in.	2¾x2¾	2¾x2¾	2¾x2¾
Weight....lbs.	2490	2590	2960

This unit has electric steel spoke wheels of integral hub type, Timken roller bearings, and special heat treated chrome vanadium steel springs. All castings are electric steel cast. Axle material is 40-45 carbon steel, especially heat treated. The main frame and cross member is 4-inch, 9½-pound I-beam.

All trailers furnished complete with one set of pole hauling bolsters and one set of cable reel saddles.

Graybar Light Pole and General Purpose Trailers

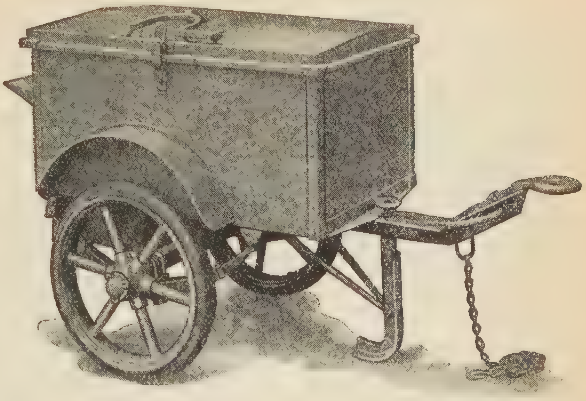


Specifications

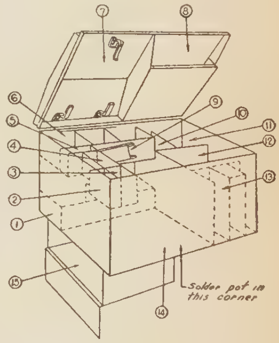
Model	L	LR	SL
Capacity....tons	2	1¾	1
Width of Platform....in.	46	46	46
Length of Platform....ft.	8	8	6
Size of Axle....in.	2½x2½	2½x2½	2x2
Tread....in.	56	56	56
Tires, Solids....in.	34x4	34x4	34x3
Weight....lbs.	1200	1400	700

Has steel spoke wheels with Timken roller bearings.

Graybar Cable Splicer's Carts



This is an all steel, compact, movable workshop. While parked, the cart is kept in a rigid, horizontal position by a support which folds up beneath the body of the cart while traveling. The underslung spring construction eliminates sluing and tipping at high speeds. Other features are the drop forged pintle hook, a 7-foot length of safety chain and convenient hand grips for use in moving the trailer about by hand.



Contents consist of:

1. Solder, paraffin dipper, test set, condenser, wooden cable dresser.
2. First aid kit.
3. Lashing wire and paster box.
4. Shave hook, furnace wrench, sleeve punches, drill holder, iron cable dresser 216-B tool, steel figures, chipping knife, furnace cleaner, pliers, test pick, test point.
5. Small materials.
6. Cotton sleeving, cotton tape, stearine, rubber bandages, hand test set, test cords, splicer's mirror and muslin.
7. Furnace shield.
8. Splicer's personal effects and specifications.
9. Cable saw.
10. Manhole shovel, solder ladle.
11. Kerosene can.
12. Kerosene furnace.
13. File, rasp, drills, soldering coppers, screw driver, wrench, hammers, paraffin thermometer.
14. All other tools and materials.
15. Tarpaulins and paraffin.

Specifications

Capacity, 1000 pounds.

Length overall, 74 inches; height overall, 41 inches.

Size of axle, 1¼ inches square; clearance, 11¼ inches.

Springs, 7 leaves, 32x1½ inches.

Tires, 24x3 inches, solid. Tread, 34 inches.

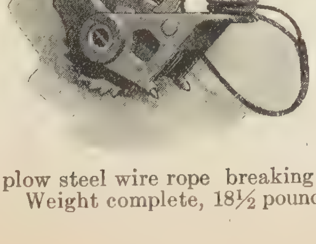
Electric steel spoke wheels with Timken roller bearings.

Length of safety chain, 84 inches.

Size of tool box, 42¼ inches long, 22 inches high, and 27 inches wide. Lower compartment is 14½ inches long, 7 inches high, and 20 inches wide.

Weight, 480 pounds.

Graybar Sure-Binders

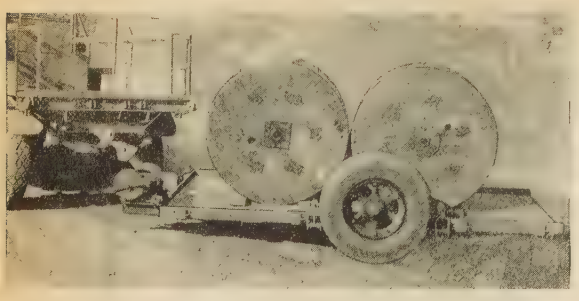


A winch and ratchet arrangement with a 1-piece cast steel base which carries the pawl, lever and ratchet winch drum. The base fits over a pole and has two heavy spurs which cut into the pole when tension is put on, thus holding the binder firmly in place.

The binder is equipped with 18½ feet of 5/16-inch trulay plow steel wire rope breaking strength, 5,000 pounds.

Weight complete, 18½ pounds.

Graybar Low-Bed Trailers



The heavily constructed frame of the Low-Bed Trailer is made of angle and channel steel, electrically welded and riveted. The cross members are steel. The trailing eye can be adjusted from 17 to 34 inches from the ground, making the trailer usable with trucks, tractors, or pleasure cars.

Specifications

Model	Cap. Tons	Axle Clearance Inches	Platform, Inches Length	Width	Height Empty	Height Loaded	Oak Inches
2-Lo-4	2	4	108	60	12	10	1⅛
2-Lo-7	2	7	108	60	15	13	1⅛
3-Lo-4	3	4	144	65	12	10	1⅛
3-Lo-7	3	7	144	65	15	13	1⅛
5-Lo-4	5	4	168	64	12	10	1½
5-Lo-7	5	7	168	64	15	13	1½

Trailer, Capacity...tons	2	3	5
Length Overall.......in.	138	174	198
Width Overall........in.	91	95	96
Semi-Elliptic Springs ....leaves	11	14	14
Size Springs..........in.	2½x⅜x50	2½x⅜x45	3x⅜x45
Tires, Solids..........in.	32x3	36x5, 36x6	36x7, 36x8
Tires, High Pressure..in.	32x6	36x8	38x9
Tires, Balloon........in.	7.50-20	9.00 20	11.25-20
Weight..............lbs.	1500	1900	2500

Wheel spindle is 2½ inches round heat treated. Lower axle is 3 inches square, hollow. Dayton steel hollow spoke wheels, with Timken taper roller bearings.

A 4-inch double channel tongue, with trailer eye of chrome nickel steel casting. Stake pockets are standard equipment.

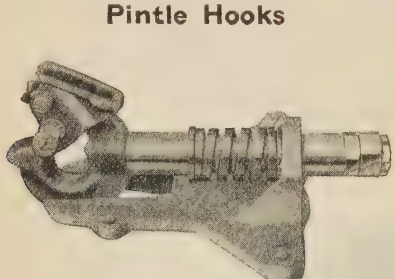
Optional Equipment

Stake racks of hardwood construction, securely bolted, furnished in heights of 3 or 5 feet.

Stakes only, of select straight grain hardwood, furnished in heights of 3 or 5 feet (10 stakes required per set).

All steel hand winch; two speeds, 4 to 1 and 24 to 1. Capacity, 5-ton straight line pull. Drum capacity, 160 feet, ⅝-inch cable; 250 feet, ½-inch cable; 325 feet, 7/16-inch cable. Size, 16x17x13 inches. Positive internal brakes. Installed on front of trailer. Easily detached.

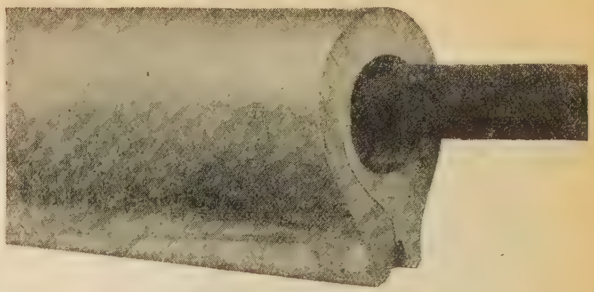
Pintle Hooks



The Model B Pintle Hook has positive locking arrangement, preventing the eye of the hook from opening when trailing. The hook is always kept in perpendicular position. Complete assembly weighs approximately 65 pounds.

The Model 1417 is used on trucks up to 3½-ton capacity. Long braces are attached to frame side members. The latch is of the positive lock type.

Salisbury Line Hose



A convenient device for protecting linemen from accidental contact with energized lines. By completely surrounding the wire with a substantial wall of voltage resisting rubber more than ample insulation is provided.

Made of high grade, clean, fresh crude rubber, combined with the proper non-metallic materials which give high dielectric strength, toughness, durability and long age.

The self-locking lip prevents the hose from being accidentally detached. Short bends can be made without exposing the conductor it covers.

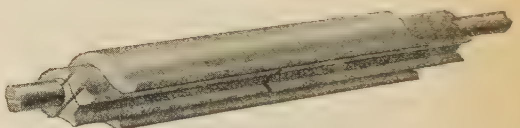
Its flexibility makes its use adaptable to various conditions of service. Readily follows the bends of taps, jumpers or leads.

Simple to place, slides on wire from either above or below. Can be removed easily. Being relatively small in diameter, light and complete, it is conveniently transported, raised and handled aloft.

Most companies have adopted the 1-inch diameter size as standard as it will cover practically all lines in distribution service. The ¼ and ⅜-inch sizes are used by telephone and telegraph companies where lines run parallel to high tension power lines and are in danger of becoming energized to a high voltage by induction.

Furnished in ¼, ⅜, ⅝, 1, 1¼ and 1½-inch sizes, inside diameter; in standard lengths of 3, 4½ and 6-foot pieces.

Salisbury Line Hose Connectors



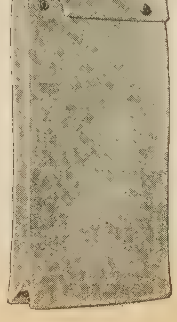
For use where two or more pieces of line hose are employed on one wire. Prevents the hose from slipping apart and thereby eliminates the possibility of the conductor being exposed between the adjoining ends.

Shaped to snugly fit the outside contour of the hose. Walls are of extra thickness to provide the necessary grip. A series of ribs, designed to grip the hose are placed on the inside surface to give connector a tight hold.

Made in 2 sizes to fit over ⅝ or 1-inch line hose.

In ordering specify hose size.

Salisbury Linemen's Glove Bags

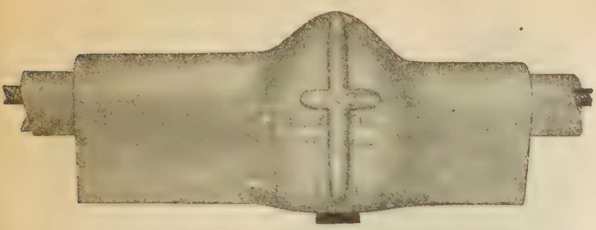


Used to protect linemen's rubber gloves when not in use. Made of heavy, tightly woven, waterproof 42-ounce white duck with non-raveling edges.

Special features: Snap back and D ring for attaching to belt; double head reinforcing rivets; sewed with linen thread, lock stitched; gusset sides and bottom, carrier flat when empty; flat lying cover; strong snap fastener; waterproof; ventilating eyelets in bottom gusset.

No.		**35**	**25**
Length	inches	15	9
Width	inches	8	8

Salisbury Rubber Insulator Hoods



Used in conjunction with line hose to cover tie-wires and conductors as they pass the insulators. Completely covers this point of hazard in a close fitting and positive manner. Can be used on double arm as well as single arm construction. The extending arms of the hood over-lap the ends of the line hose.

Compounded to secure high insulating qualities over a long period of time. Vulcanized in steel molds while under great pressure, in heavy duty presses; retains its shape and flexibility. Thick walls of solid rubber give it ability to stand up under severe conditions of use.

Requires no attachments to hold it in place. Securely locks itself to the under side of the insulator and cannot open, turn, slide or become accidentally dislodged.

Solid rubber flanges extending inwardly from under sides of the body portion serve to grip the under side of the insulators. Exterior ribs are placed to reinforce the side walls and to increase the grip.

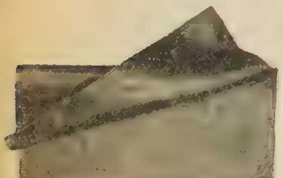
Inside dimensions arranged so hood properly fits all popular types of pin insulators in distribution service.

Length, 14¾ inches. Height, 6¼ inches.

Weight, 4 pounds. Packed one to a carton.

Telephone and telegraph companies use a special hood shaped to fit telephone style insulators. As it is used on single arm poles only both extending arms of hood are of the same diameter and will snugly grip the ¼-inch size line hose. In ordering, specify Telephone Type.

Salisbury Rubber Protective Blankets



Particularly useful in covering secondary racks, dead ends, cut-outs, pot heads, arresters, and similar equipment. Also useful in station and underground work.

Will fold, wrap or hang suspended in any position to provide an insulating barrier between electrical workers and hazards adjacent to their working position.

Bead molded on all four sides to prevent tearing.

Duck Inserted—Black

Recommended for hardest service conditions. Has ample flexibility. Guaranteed on acceptance tests to resist 20000 volts for 3 minutes.

Plain		With Eyelets	
No.	Size, Inches	No.	Size, Inches
100	36x36x⅛	100-E	36x36x⅛
200	27x36x⅛	200-E	27x36x⅛

All Rubber—Black

More pliable than the duck inserted type. Guaranteed on acceptance tests to resist 20000 volts for 3 minutes.

Plain		With Eyelets	
No.	Size, Inches	No.	Size, Inches
300	36x36x⅛	300-E	36x36x⅛
400	27x36x⅛	400-E	27x36x⅛

Pure Gum Center—Maroon

For classes of work requiring extreme flexibility and lightness in weight. Desirable for close wrap around work. Guaranteed on acceptance tests to resist 30000 volts for 3 minutes.

Plain		With Eyelets	
No.	Size, Inches	No.	Size, Inches
500	36x36x⅛	500-E	36x36x⅛
600	27x36x⅛	600-E	27x36x⅛

Salisbury Protective Rubber Sleeves

Formed and Vulcanized in Chromium Plated Molds

Full Length

Used to protect the arms and shoulders from accidental contact with energized equipment. The lower ends fit under the gauntlets of rubber gloves.

Amply reinforced around the eyelet hole and the openings are protected with a substantial bead.

Fastened across the shoulders by an adjustable rubber strap and rubber buttons. A fastener is furnished with each pair of sleeves.

Guaranteed on initial tests to resist 10000 volts for 3 minutes with water electrodes.

Outside arm length, 25 inches. Inside arm length, 17½ inches. Wrist opening, 5½ inches. Arm opening, 11 inches.

Packed one pair to a carton.

Elbow Length

Fit fairly close around the forearm but permit free arm movement as they are very flexible. Molded in one seamless piece.

The combination of short sleeves with standard length gloves is economical for if either are damaged it is only necessary to replace the unserviceable glove or sleeve.

Guaranteed on acceptance tests to resist application of 10000 volts for 3 minutes between water electrodes.

Outside arm length, 16¼ inches. Inside arm length, 13½ inches. Wrist opening, 4¼ inches. Arm opening, 6¾ inches.

Packed one pair to a carton.

Salisbury Static-Resisting Line Coats

The special construction of this coat retards static tingling at the neck or wrists when the garment is used during wet weather on work that is adjacent to energized conductors.

Special features: Inside double back; special rubber fasteners; reinforced at belt; all seams sewed and cemented; insulating skirt collar; roomy raglan shoulders; insulating storm cuffs; storm fly front.

Guaranteed to be free from all defects in material or workmanship.

The all rubber collar is standard. Corduroy faced collar can be furnished if desired.

Furnished in sizes 36 to 46 inclusive. Length, 47 inches.

Packed one to a carton.

Salisbury Electric All-Rubber Coats

For the class of service that does not require the additional features and protection offered by a static-resisting line coat.

Made of strong durable material, coated on the outside surface with high grade rubber and a frictioned coating on the inside. No metal is used in its construction.

The inner cuff of the double-storm cuff is made of pure gum rubber. The collar is of standard lay-down type. Reinforced at hips to protect coat from tool belt abrasion. Has raglan shoulders, all rubber fasteners and storm fly front.

Furnished in sizes 36 to 46.

Length, 46 inches.

Salisbury Steam Cured Linemen's Rubber Gloves

No. 90
Straight Finger Style

No. 100
Curved Finger Style

With the realization that rubber gloves are the most important article in a lineman's equipment and that strength and durability are imperative for safety, Salisbury's Gloves are most conscientiously made.

Only the best materials are used and all operations from mixing to final inspection are carefully conducted. Investigation and experiment in laboratory, factory and field are constantly made to discover possible improvements in either material or manufacturing operations.

Qualities of high insulation, low leakage, strength, flexibility and long life are evenly balanced. Each of these essentials is raised to the highest possible value without lowering the standard of some other property.

To satisfy all demands, Salisbury's Gloves are furnished in either the No. 90 standard straight finger or the No. 100 curved finger styles. Both types are furnished in 10000, 15000 and 20000-volt ratings. There is also a choice of gloves that are vulcanized by either the steam or acid process.

All gloves are seamless, form fitting, accurate to size, with finger lengths and widths adjusted to best meet average conditions.

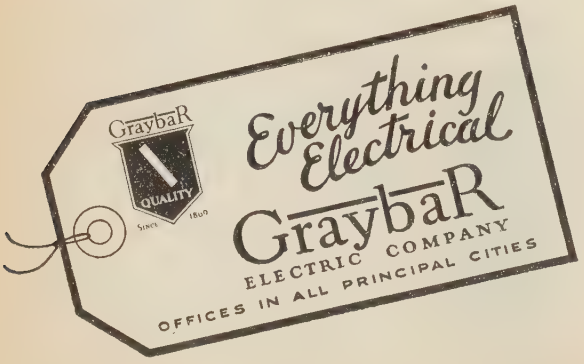
Salisbury Rubber Gloves are guaranteed to pass the most thorough inspection and to meet the A.S.T.M. and N.E.L.A. specifications.

Replacement will be made, or return accepted, of all gloves which fail under initial tests at their rated voltage or otherwise prove unsatisfactory at the time of delivery.

Class B—10000-volt, 14-inch gloves are standard.
Class A—10000-volt, heavier weight gloves are available.

Furnished in sizes 9, 9½, 10, 10½, 11 and 12.

Packed one pair to a box.



Salisbury Linemen's Protector Gloves

Full Gauntlet 4-Inch Style

Designed to wear over Linemen's Rubber Gloves to protect them from snagging, tearing or abrasive wear. Made expressly for this work and should not be confused with the ordinary work gloves.

Made of specially tanned grade A buffed horsehide, maroon color, and from selected weights.

Remains soft and pliable under all conditions and will not become slippery when wet. Resists wire puncture to a great degree.

All outside seams are lock stitched. Finger seams sewed at back away from wearing surface. Extra wide reinforcement at thumb seam, making double leather thickness at this point of hardest wear. Finger tips are semi-moccasin style. Equipped with leather pull straps and self engaging buckle to tighten at wrist. Gauntlet does not flare; has a firm back and soft leather front.

Available with either closed or open backs, and also with long thumb crotches for straight finger rubber gloves or short thumb crotches for curved finger gloves.

For Use With Straight Finger Rubber Gloves

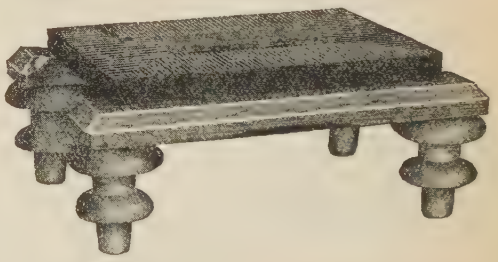
No.....	18-C	18	20-C	20
Style Back	Closed	Open	Closed	Open
Covers Rubber				
Glove Sizes..	9, 9½, 10	9, 9½, 10	10½, 11, 12	10½, 11, 12

For Use with Curved Finger Rubber Gloves

No.....	118-C	118	120-C	120
Style Back	Closed	Open	Closed	Open
Covers Rubber				
Glove Sizes...	9, 9½, 10	9, 9½, 10	10½, 11, 12	10½, 11, 12

Order by number.

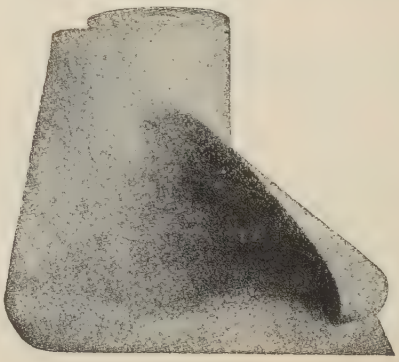
Salisbury Insulating Stools



A low platform on which workmen can stand while performing hazardous tasks in sub-stations, power plants, underground vaults, etc. Has corrugated rubber top and double petticoat rubber insulators for legs. The stool is non-tipping and non-slipping. Dry test flashover, 82,000 volts. Wet test flashover, 19,000 volts.

Size, 18x12 inches, 8 inches high. Weight, 15 pounds.

Salisbury Switchboard Rubber Matting



A non-slip corrugated surface matting of high dielectric strength and long aging qualities.

Meets requirements of all standard specifications.

Guaranteed to resist 50000 volts for 3 minutes on acceptance tests.

Furnished in ¼-inch thickness; 24, 30 and 36-inch widths; lengths up to 75 feet. Other widths and thicknesses can be furnished.

No. 30 Salisbury Non-Metallic Tool Bags

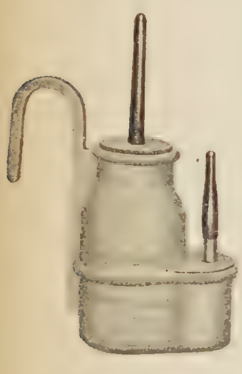
The tool bag is an essential part of line crew equipment as it is an efficient method of raising tools, supplies and material to the pole top.

This bag is of sturdy construction, amply reinforced and designed throughout for heavy duty service.

Made of duck with a single side seam together with top and bottom fastenings strongly sewed. The heavy leather bottom extends 3 inches up the sides. The top is held open, in round form, by a stout non-metallic ring. A ⅜-inch rope handle is firmly spliced to the bag through leather reinforcements. Equipped with a utility pocket on the inside to accommodate small tools, bolts, washers, etc. Bag is collapsible.

Diameter, 12 inches. Height, 15 inches.

Salisbury Non-Spillable P.B. Paint Pots



This is a rubber container for insulating compound, soldering flux and brushes.

The pot is made of semi-hard, durable rubber and has high insulating qualities. Compound or paste will not affect the container.

A flange extending inward at the junction of the neck prevents the contents from splashing or spilling during rough handling. Compound and paste receptacles are equipped with tapered corks through which rubber-set brushes are securely inserted. When the brushes are in use these stoppers serve as guards to prevent the paint from flowing back to soil the gloves or hands of the operator.

Salisbury Separators and Test Caps

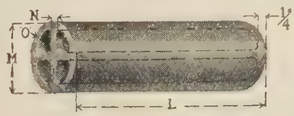
Cable end test caps and separators are used as a protective covering for cable ends when cable is cut for tests or during temporary repairs. They serve a double purpose by eliminating the possibility of man touching the exposed ends and protecting the cable from moisture. In covering single conductor cable ends, test caps alone are used.

Guaranteed to resist 10000 volts under the wet method of testing.

Test Caps

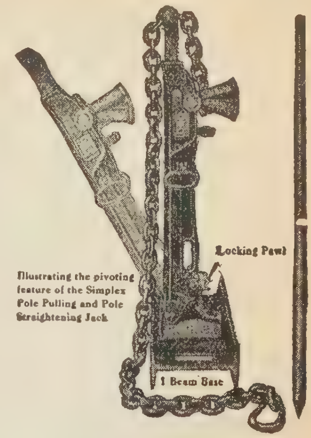
No.	Cable Size	Dimensions, Inches A	B	C	D	E	F	G	H	J	K
370	6-1/c	¼	1½	3¾	½	1/16	1⅛	1¼	1½	⅝	6
371	1/0-1/c to 4.0-1/c	¼	1½	3¾	½	1/16	1⅜	1½	1 13/16	15/16	6
713	No. 6—4/c	¼	2	4¼	½	1/16	1¼	1⅜	1½	¾	7
711	No. 0—4/c	⅜	2½	6½	⅝	⅛	1⅞	2	2½	1⅜	10
777	375-MCM—4/c	⅜	2½	8½	⅝	⅛	2¾	2⅞	3⅜	2¼	12

Separators



No.	Cable Size	Dimensions, Inches L	M	N	O
714	No. 6—4/c	3	1	⅛	1/16
712	No. 0—4/c	4¼	1½	⅛	⅛
782	375-MCM—4/c	4½	2 7/16	5/32	5/32

No. 329 Simplex Pole Pulling Jacks



Single acting; automatic in raising and lowering, will not trip. For pulling and straightening telephone, telegraph, electric light and trolley poles any depth in the ground without digging around them.

With 8-foot steel chain, 5-foot steel pinch bar and steel I-beam base.

No.	329
Capacity.......tons	15
Height.......inches	37½
Lift..........inches	21
Wt., Complete..lbs.	193
Price..........each	$70.00

No. 325 Simplex Pole Jacks

A combination pushing and pulling jack. Light and sturdy. Furnished with pike pole, steel chains, detachable base and steel lever pole.

No.	325
Capacity.......tons	5
Height.......inches	48
Lift.......inches	36
Weight, without Equipment...lbs.	33
Weight, with Equipment......lbs.	100
Price, with Equipment.......each	$45.00
Price, without Equipment, with Lever Box.......each	29.00

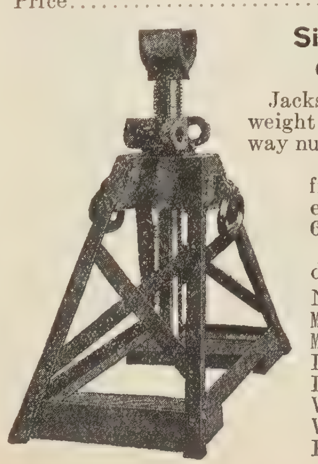
No. 324 Simplex Aerial Cable Jack and Slack Puller

Designed for pulling both overhead and underground power and telephone cables. Also for taking up slack in guy wires.

Made from the best grade of steels and all parts are heat-treated and hardened. Single acting and automatic operation.

No.	324
Capacity.......pounds	4000
Travel.......inches	20
Weight, Complete with Handle.......pounds	14
Price.......each	$25.00

Simplex Screw Type Cable Reel Jacks



Jacks will handle any standard weight reel with the use of the 3-way nuts.

No. 1 jack handles reels from 42 to 60 inches in diameter; No. 2 handles reels from 60 to 90 inches in diameter.

Size of screw, 1⅞ inches in diameter.

No.	1	2
Min. Ht. Bearing Pt. in.	19⅝	29¾
Max. Ht. Bearing Pt. in.	31⅛	46¼
Lift.........in.	11½	16½
Length Base in.	26	39½
Width Base in.	12	15½
Weight....lbs.	51	89
Price..per pair	$36.00	48.00

Simplex Cable Reel Jacks

Automatic Lowering

No. 321

No. 322

Nos. 320 and 321 are recommended for warehouse service in handling cable, wire rope and belting reels. No. 320 is single acting for reels from 20 to 60 inches in diameter. No. 321 is single acting for reels from 20 to 96 inches in diameter.

No. 322 is generally used for heavy outdoor service. It is double acting for cable reels ranging from 36 to 84 inches in diameter. The T-shaped base provides a firm foundation. Furnished in pairs, one right and one left hand, for uniform operation on each side of the reel.

These jacks are furnished with steel lever bars.

No.	**320**	**321**	**322**
Each	**$35.00**	**50.00**	**65.00**
Capacity....tons	5	10	10
Height....inches	21	34½	29
Lift....inches	11	14½	14
Weight....pounds	46	108	104

Simplex Portable Cable Reel Jacks

No. 41

No. 81

Jack held on oak base by taper wedged brackets—can be quickly removed and packed in tool box. Made single acting, raising the load on the downward stroke only, and double acting, raising the load on both the downward and upward strokes.

Designed to lift small, but heavy cable reels from 24 inches to 48 inches diameter, and can readily be used for any work, where 1 to 2-ton loads are to be handled.

	Double Acting			Single Acting			
Cat. No.	**41**	**42**	**43**	**81**	**82**	**83**	**84**
Capacity...tons	1	1½	2	1	1½	2	5
Lift......in.	8	9½	11	7	8½	9¾	7½
Height.... "	11½	13¼	14½	11¾	13¼	14¾	16
Total Height........in.	19½	22¾	25½	18¾	21¾	24½	23½
Weight with Base..lbs.	15½	18	19	17½	18½	19½	35
Price..each	**$16.00**	**18.00**	**20.00**	**16.00**	**18.00**	**20.00**	**24.00**

No. 310 Simplex Emergency Single Acting Jacks

A single acting, 15-ton jack of extraordinary utility and efficiency. Its pivoting base enables jack to be operated at full capacity, at any angle from horizontal to vertical, as well as vertically.

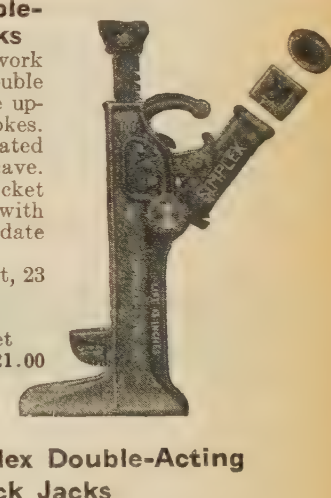
An all-around jack for use anywhere and everywhere heavy objects are to be pushed or lifted.

The steel detachable shoe and 5-foot special chain attachment permit grappling and engaging loads in awkward or difficult positions, and where the ordinary lifting jack could not operate at all. Heavy calks on base prevent slipping.

Provided with four lifting and pushing points—rotating cap, lower lift, steel adjustable shoe and steel chain, enabling jack to meet every emergency condition.

Capacity....tons	15
Lift....inches	13
Height....inches	22¼
Weight, Jack....pounds	66
Weight, Chain, Bar and Shoe....pounds	36
Weight, Total....pounds	102
Each	**$48.00**

No. 101 Simplex Double-Acting Track Jacks



Recommended for track work only. Tripping style, double acting and operates on the upward and downward strokes. Working parts, heat-treated drop forgings. Base concave. Furnished with round socket and 5-foot round pole or with square socket to accommodate standard lining bar.

Capacity, 12 tons. Height, 23 inches. Lift, 12½ inches.

Weight, 59 pounds.

No. **101**, with Square Socket without Pole.....each **$21.00**

No. **101**, with Round Socket and Round Pole...................each **$22.00**

No. 106 Simplex Double-Acting Track Jacks

For track work only.

Working parts are heat-treated drop forgings. Base is cored or concaved. Furnished with round socket and 5-foot round pole or with square socket to accommodate standard lining bar. Tripping style, double acting.

Capacity....tons	12
Height....inches	29
Lift....inches	17½
Weight....pounds	78
No. **106**, with Square Socket without Pole....each	**$27.00**
No. **106**, with Round Socket and Round Pole....each	**28.00**

Simplex Track and Ballast Jacks

Single Acting—Tripping Type

No. 217

No. 217 is recommended for track work only. Operates on downward stroke of lever. Its manpower and strength have been approved by the Underwriter's Laboratories.

The rack bar and retaining pawl are of alloy steel, heat-treated; the lifting pawl is high carbon steel, heat-treated; the socket is a steel casting; the base is arched to prevent bending or slipping.

Piano wire coil spring and plunger back of retaining pawl forces it into holding position with a sharp click.

Nos. 216 and 218 are identical with No. 217 except for the heights of the standards and rack bars.

No.	216	217	218
Square Socket without Lever Bar.ea.	$19.00	21.00	27.00
Capacity.....tons	15	15	15
Height.....inches	17¼	23	29½
Lift.....inches	8	12½	18
Weight.....pounds	51	58	74

When oval or round sockets, together with oval or round hickory poles are specified, add $1.00 to the price.

No. 185 Simplex Mine and Industrial Jacks

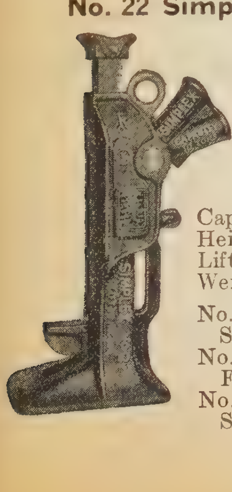
Single Acting, Automatic Lowering

Designed for handling coal cutting equipment, mine machines, rerailing mine cars; also for contractors, agricultural machinery, tractors and industries. Recommended for heavy overloads. Its double socket and adjustable shoe provide a wide range of service for industries and mines.

Equipped with steel lever bar.

Capacity.....tons	5
Height.....inches	16⅝
Lift.....inches	9¾
Weight.....pounds	36
No. 185.....each	**$17.00**
No. 185, Without Adjustable Shoe.....each	16.00

No. 22 Simplex Single Acting Jacks



Single acting and automatic in raising and lowering. For electric and steam railway service, contractors and general shop and industrial service. Without machine screw. Working-parts, steel drop forgings. With 5-foot lever steel pole.

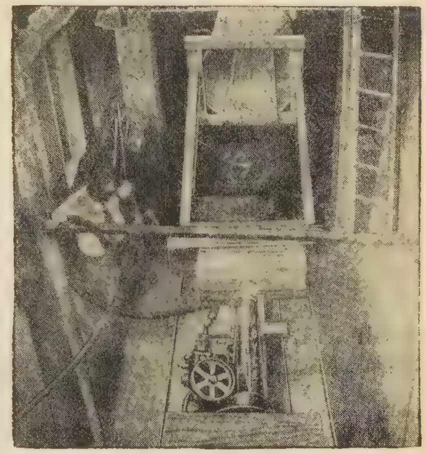
Capacity.....ton	10
Height.....inches	21¼
Lift.....inches	12
Weight.....pounds	59

No. **22**, with Double or Round Socket and 5-Ft. Round Steel Bar.each	$25.00
No. **22**, with Oval Socket and 5-Ft. Oval Pole.....each	25.00
No. **22**, with Square or round Socket without Pole.....each	24.00

Joyce Air-Motor-Driven Jack Hoists

Ball-Bearing Geared Screw Type

For Locomotives, Coaches and Cars



With this hoist compressed air replaces man power for jacking. One man controls the speed of operation of a pair of hoists from a Y valve in the air line, or each hoist may be operated by means of its control lever. This lever opens and closes the throttle valve to the reversible Ingersoll-Rand motor which is a part of the hoist. The control lever governs the direction of operation (up or down) as well as the speed which ranges from 0 to 8 inches per minute for coach model. Changes in gearing make possible special hoists with ⅓ the capacity and 3 times the speed.

The hoist lowers by reversing the motor. It is not self-lowering. There is no chance of running down or dropping for any reason whatever, such as a broken air hose, etc.

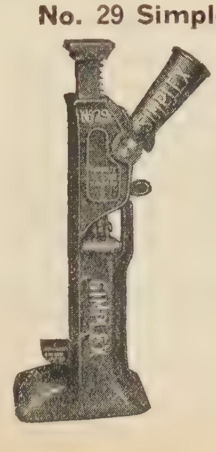
There is an automatic shut-off at both upper and lower limits of the ram. The hoist is so powerful that a reduction of air pressure does not affect the operation any more than a slight slowing down of the motor.

The large wheels which are 10 inches in diameter, facilitate movement. Hoist is equipped for alemite lubrication.

A hand operated 12-inch adjustable ram feature is provided in Nos. 17713 and 17413. This eliminates blocking and permits full raise under load. No. 17718 has telescoping screws and rams which provide a high rise.

Hoist No.	Service	Rated Capacity Tons	Height Inches	Rise Inches	Weight Pounds
1799	Locomotive	75–100	26	13¾	460
17915	Locomotive	75–100	44	30	605
17718	Coaches	50	36	40	535
17713	Loaded Cars	50	26	13¾	450
17712	Coaches	50	36	24½	435
17710	Loaded Cars	50	28	16½	390
17413	Empty Cars	20	26	13¾	450
17410	Empty Cars	20	28	16½	390

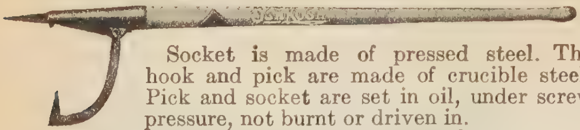
No. 29 Simplex Single Acting Car Jacks



No. 29 Simplex jack is a powerful 15-ton automatic jack. Particularly adapted for steam and electric railway service, contractors', steel mills, and general industrial duty. Built without a machine screw. Equipped with Simplex oval socket and 6-foot oval pole.

Capacity.....tons	15
Height.....inches	28½
Lift.....“	18
Weight.....pounds	98
Price, No. **29**, with Oval Socket and 6-foot Oval Pole...each	$40.00
Price, No. **29**, with Round Socket and 6-foot Round Pole.....each	40.00
Price, No. **29**, with Square Socket without Pole....each	38.00

Oshkosh Malleable Solid Socket Peavies



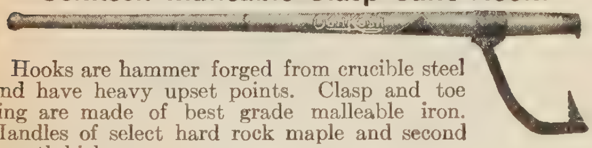
Socket is made of pressed steel. The hook and pick are made of crucible steel. Pick and socket are set in oil, under screw pressure, not burnt or driven in.

Takes same handles as cant hooks.

Regular Maple Handles

Cat. No.	Each	Size In.xFt.	Weight Pounds
121	$4.67	2¼x4	7
122	4.74	2¼x4½	7
124	4.96	2½x4	9
125	5.03	2½x4½	9
Select Hickory Handles			
134	$5.44	2¼x4	8
135	5.71	2¼x4½	8
137	5.63	2½x4	9
138	5.88	2½x4½	10

Oshkosh Malleable Clasp Cant Hooks



Hooks are hammer forged from crucible steel and have heavy upset points. Clasp and toe ring are made of best grade malleable iron. Handles of select hard rock maple and second growth hickory.

Select Maple Handles

Cat. No.	Size In.xFt.	Wt., Lbs. Each	Price Each
188A	2¼x4	7	$4.45
189A	2¼x4½	8	4.60
188	2½x4	8	4.50
189	2½x4½	8⅓	4.70
Select Hickory Handles			
199A	2¼x4	7	$5.10
200A	2¼x4½	8	5.30
199	2½x4	8	5.20
200	2½x4½	9	5.30

Wood Handles for Cant Hooks

Maple Handles

Cat. No.	Diameter Inches	Length Feet	Weight Pounds Each	Price Each
541	2¼	4	3	$1.50
542	2¼	4½	3	1.70
544	2½	4	3	1.50
545	2½	4½	4	1.70
Hickory Handles				
572	2¼	4	3	$1.80
573	2¼	4½	3	2.00
575	2½	4	4	1.80
576	2½	4½	4	2.20

No. 10 Oshkosh Pike Pole Guards

For guarding the hazardous point on pike poles.

The guard works easily and fastens securely in either the guarded or open position. When in the unguarded position, the guard is completely out of the way, snugly fitted around the pole. When in the guarded position, it automatically locks in place and provides complete protection from the pike point.

This guard will fit either the 2-inch or 2½-inch pike poles. It is light in weight, adding only 7 ounces to the pike pole.

Shipping weight, 7 ounces.

No. 10 .... each **$1.34**

Oshkosh Carrying or Lug Hooks

For handling poles and heavy timbers. Made with crucible steel chisel point hooks, and malleable iron clasps and swivels. Handles of selected hard rock maple.

Regular Pattern

Cat. No.	Size In. x Ft.	Wt., Lbs. Each	Price Each	Cat. No.	Size In. x Ft.	Wt., Lbs. Each	Price Each
295	2½x4	7	$5.40	297	2½x5	8	$5.60
296	2½x4½	8	5.50	...	.....	..	.....
Extra Heavy, with Steel Swivels							
298	3 x5	12	7.70	300	3 x7	14	$10.00
299	3 x6	13	8.30	...	.....	..	.....

Wood Handles for Carrying or Lug Hooks

Rock Maple

Regular

Cat. No.	Each	Diam. Inches	Lgth. Ft.	Wt., Lbs. Each
593	$1.50	2½	4	3
594	1.70	2½	4½	4
595	1.80	2½	5	4
Extra Heavy				
963	$2.60	3	5	5
964	3.00	3	6	6
965	3.30	3	7	7

Oshkosh Plain Pike Poles

Handles of old growth yellow Washington Fir, straight grained, and free from defects. Pike is of crucible steel with upset shoulder, which distributes the thrust on the entire top of the pole. The pike is driven in and fastened with a rivet running through ferrule, pike and pole.

Standard Small Size

Handle is 2 inches even diameter no taper.

Cat. No.	Size In. x Ft.	Wt., Lbs. Each	Price Each	Cat. No.	Size In.	Wt., Lbs. Ft.	Price Each
805	2x10	6	$5.00	807	2x14	10	$6.20
806	2x12	8	5.50	808	2x16	11	7.60

A.T.&T. Pattern

Handle is 2½ inches in the middle and tapers to 2 inches at each end.

817	2½x10	12	$6.10	820	2½x16	15	$9.20
818	2½x12	13	6.50	821	2½x18	18	10.10
819	2½x14	14	7.80	822	2½x20	20	11.70

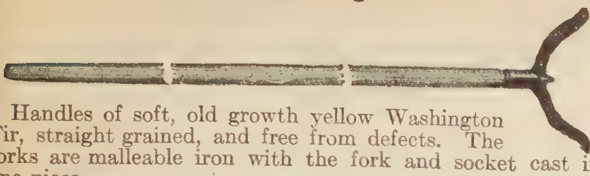
Wood Handles for Pike Poles

Made of yellow Washington Fir.

Regular Size

Cat. No.	Diam. In.	Lgth. In.	Wt., Lbs. Each	Price Each
970	2	10	6	$3.50
971	2	12	7	4.00
972	2	14	9	4.50
973	2	16	10	6.20
A.T.&T. Pattern—Tapered				
982	2½	12	12	$6.30
983	2½	14	13	6.90
984	2½	16	14	7.60
985	2½	18	16	8.80
986	2½	20	19	9.80

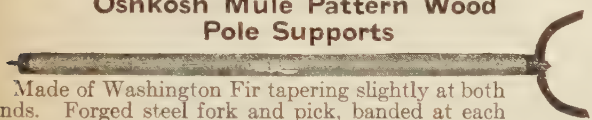
Oshkosh Raising Forks



Handles of soft, old growth yellow Washington Fir, straight grained, and free from defects. The forks are malleable iron with the fork and socket cast in one piece.

Cat. No.	Size In.xFt.	Wt., Lbs. Each	Price Each
832	2 x10	10	$7.00
833	2 x12	12	7.70
834	2 x14	13	8.90
795	2 x16	15	10.70
796	2½x12	13	10.80
797	2½x14	14	11.70
835	2½x16	15	12.30
836	2½x18	16	13.00
837	2½x20	18	13.50

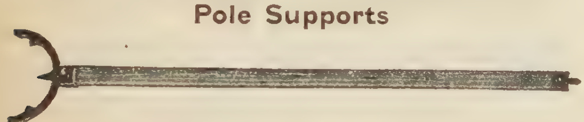
Oshkosh Mule Pattern Wood Pole Supports



Made of Washington Fir tapering slightly at both ends. Forged steel fork and pick, banded at each end with steel bands.

Cat. No.	Size Ft.	Diam. at Ctr., In.	Wt., Lbs. Each	Price Each	Cat. No.	Size Ft.	Diam. at Ctr., In.	Wt., Lbs. Each	Price Each
845	6	3½	23	$18.60	847	8	4½	29	$23.80
846	7	4	26	21.60	.	..	.	..	.....

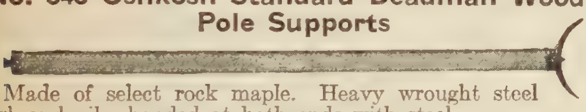
No. 740 Oshkosh Fir Deadman Wood Pole Supports



Of clear, straight grained fir. Measures 3x3 inches square, 8½ feet over all. Steel fork has three prongs.

No. 740, Weight, 40 Pounds....................each **$16.95**

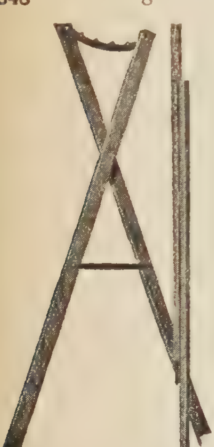
No. 848 Oshkosh Standard Deadman Wood Pole Supports



Made of select rock maple. Heavy wrought steel fork and pike banded at both ends with steel.

Cat. No.	Size Ft.	Size of Wood, In.	Wt., Lbs. Each	Price Each
848	8	4x2	29	$27.40

Oshkosh Jenney Pattern Wood Pole Supports



Made of Washington Fir with forged steel fork.

Steel pikes are placed in the bottom to prevent it from slipping on hard ground.

This support is collapsible and has steel bushed holes where there is any wear.

A light, strong, safe, pole support.

Cat. No.	Size Ft.	Size of Wood, In.	Wt., Lbs. Each	Price Each
842	6	1¾x3	25	$18.60
843	7	1¾x3½	30	21.30
844	8	1¾x3½	35	23.10

Oshkosh Special Pike Pole Coating

Oshkosh Pike Poles finished with this specially developed coating prevent loss of time caused by slivers and splinters.

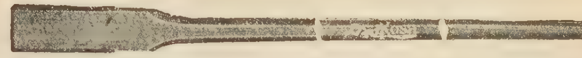
It gives a smooth, hard, transparent coating.

This coating keeps the grain from raising.

It is a non-conductor of electricity.

Can be applied at a slight additional charge.

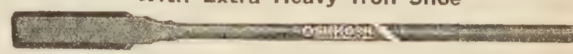
Oshkosh Tamping Bars



Handle is made of hard rock maple. The tamping head is faced with an iron shoe, and measures 1¾x4 inches.

Cat. No.	Size Feet	Weight Pounds Each	Price Each	Cat. No.	Size Feet	Weight Pounds Each	Price Each
854	7	13	$7.30	856	9	16	$8.90
855	8	14	8.10	...	.	..	...

Oshkosh Tamping Bars
With Extra Heavy Iron Shoe



Made with hard rock maple handles with 1¼x½-inch steel shoe on tamping face.

Cat. No.	Size Ft.	Wt., Lbs. Each	Price Each	Cat. No.	Size Ft.	Wt., Lbs. Each	Price Each
1054	7	13	$6.70	1056	9	15	$8.10
1055	8	15	7.30	....	..	..	.....

No. 1044 Oshkosh Electric Tamping Bars

Made of steel tubing with malleable iron tampers of different size on each end.

Cat. No.	Size Ft.	Wt., Lbs. Each	Price Each
1044	8	15	$7.90

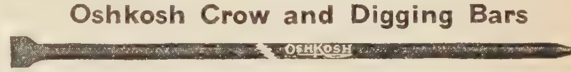
No. 853 Oshkosh Loys or Slicks

The handle is of 2-inch selected maple and the blade is of tool steel 4x½ inches, burned onto the handle and held by two large rivets.

Length, eight feet. Weight, 18 pounds each.

Price, No. 853..............................each **$13.60**

Oshkosh Crow and Digging Bars



Made of special octagon crucible steel.

Cat. No..................	1061	1062	1064	1065	1066
Each......................	$6.83	7.26	7.60	8.59	9.87
Size..............inches	1	1	1⅛	1⅛	1⅛
Length................feet	7	8	7	8	9
Weight............pounds	20	23	26	28	31

Oshkosh Tamping and Digging Bars

Made of special octagon crucible steel, tough and stiff.

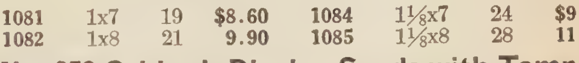
Cat. No.	Size Inches x Feet	Weight Pounds Each	Price Each	Cat. No.	Size Inches x Feet	Weight Pounds Each	Price Each
1071	1x7	20	$9.90	1074	1⅛x7	26	$10.90
1072	1x8	23	10.40	1075	1⅛x8	30	12.60

Oshkosh Plain Digging Bars

Made of special octagon crucible steel, tough and stiff.

Cat. No.	Size Inches x Feet	Weight Pounds Each	Price Each	Cat. No.	Size Inches x Feet	Weight Pounds Each	Price Each
1081	1x7	19	$8.60	1084	1⅛x7	24	$9.90
1082	1x8	21	9.90	1085	1⅛x8	28	11.50

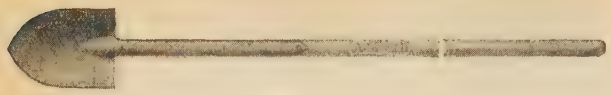
No. 852 Oshkosh Digging Spuds with Tamper



A light, evenly balanced digging tool. Handle is made of steel tubing with a tamping head of malleable iron, and the blade and socket are of one piece of forged high carbon steel.

Cat. No.	Size Ft.	Wt., Lbs. Each	Price Each
852	9	20	$10.60

Oshkosh Straight Handle Shovels



Handles are extra large in diameter, measuring 1 13/16 inches.

With Carbon Steel Blade

Maple Handles

Cat. No.	Each	Handle Feet	Strap Inches	Weight Pounds	Extra Handles Cat. No.	Extra Handles Each	Extra Handles Weight Pounds
867	$4.24	7	22	8	993	$2.12	4
868	4.70	8	22	9	994	2.37	5
869	5.00	9	22	10	995	2.62	6
870	5.51	10	22	11	996	3.00	7
			*Ash or Hickory Handles				
1032	$4.64	7	22	8	1005	$2.95	6
1033	5.10	8	22	9	1006	3.28	6
1034	5.54	9	22	10	1007	3.87	7
1035	5.91	10	22	11	1008	1.12	7

With Alloy Steel Blade

*Ash or Hickory Handles

2032	$5.11	7	22	8	2005	$2.95	6
2033	5.56	8	22	9	2006	3.28	6
2034	6.00	9	22	10	2007	3.87	7
2035	6.51	10	22	11	2008	1.12	7

*For hickory handle, add letter H to Cat. No.

Oshkosh Crooked Handle Shovels

Handles are made of selected second growth Northern white ash, tough, strong Highland hickory, or hard rock maple. They are extra large, 1 13/16 inches in diameter.

With Carbon Steel Blade

Maple Handles

Cat. No.	Each	Handle Feet	Strap Inches	Weight Pounds	Extra Handles Cat. No.	Extra Handles Each	Extra Handles Weight Pounds
874	$4.24	7	22	8	1000B	$3.26	4
875	4.70	8	22	9	1000	3.78	5
			*Ash or Hickory Handles				
1040	$4.64	7	22	8	1014	$3.15	6
1041	5.10	8	22	9	1015	3.48	6
1042	5.54	9	22	10	1016	4.07	7
1043	5.91	10	22	11	1017	4.67	7

With Alloy Steel Blade

*Ash or Hickory Handles

2040	$5.11	7	22	8	2014	$3.15	6
2041	5.56	8	22	9	2015	3.48	6
2042	6.00	9	22	10	2016	4.07	7
2043	6.51	10	22	11	2017	4.67	7

*For hickory handle, add letter H to Cat. No.

Oshkosh Short Handled Shovels

With Carbon Steel Blade

The handle is made of Northern white ash, air seasoned.

Cat. No.	Each	Style of Blade	Wt. Lbs.	Extra Handles Cat. No.	Extra Handles Each	Extra Handles Length Feet	Extra Handles Wt. Lbs.
1090R	$2.04	Round Point	5	1091	$.63	4½	2
1090S	2.04	Square Point	5	1091	.63	4½	2

With Alloy Steel Blade

Equipped with fine quality ash handle.

2090R	$2.24	Round Point	5	2091	$.63	4½	2
2090S	2.24	Square Point	5	2091	.63	4½	2

Oshkosh Western Pattern Post Hole Spoons

With Carbon Steel Blade

Maple Handles

Cat. No.	Each	Handle Feet	Strap Inches	Weight Pounds	Extra Handles Cat. No.	Extra Handles Each	Extra Handles Wt. Lbs.
859	$4.67	7	22	10	993	$2.12	4
860	4.87	8	22	10	994	2.38	5
861	5.04	9	22	11	995	2.62	6
862	5.56	10	22	11	996	3.00	7
			*Ash or Hickory Handles				
1023	$5.00	7	22	10	1005	$2.95	6
1024	5.47	8	22	10	1006	3.28	6
1025	5.84	9	22	11	1007	3.87	7
1026	6.30	10	22	12	1008	4.47	7
1027	7.12	12	22	14	1009	5.18	8

With Alloy Steel Blade

*Ash or Hickory Handles

2023	$5.54	7	22	10	2005	$2.95	6
2024	5.87	8	22	10	2006	3.28	6
2025	6.44	9	22	11	2007	3.87	7
2026	6.90	10	22	12	2003	4.47	7
2027	7.79	12	22	14	2009	5.18	8

*For hickory handle, add letter H to Cat. No.

Oshkosh Eastern Pattern Post Hole Spoons

With Carbon Steel Blade

Maple Handles

Cat. No.	Each	Handle Feet	Strap Inches	Weight Pounds	Extra Handles Cat. No.	Extra Handles Each	Extra Handles Wt. Lbs.
859E	$4.67	7	22	10	993	$2.12	4
860E	4.87	8	22	10	994	2.38	5
861E	5.04	9	22	11	995	2.62	6
862E	5.56	10	22	11	996	3.00	7
			*Ash or Hickory Handles				
1023E	$5.00	7	22	10	1005	$2.95	6
1024E	5.47	8	22	10	1006	3.28	6
1025E	5.84	9	22	11	1007	3.87	7
1026E	6.30	10	22	12	1008	4.47	7
1027E	7.12	12	22	14	1009	5.18	8

With Alloy Steel Blade

*Ash or Hickory Handles

2023E	$5.54	7	22	10	2005	$2.95	6
2024E	5.87	8	22	10	2006	3.28	6
2025E	6.44	9	22	11	2007	3.87	7
2026E	6.90	10	22	12	2008	4.47	7
2027E	7.79	12	22	14	2009	5.18	8

*For hickory handle, add letter H to Cat. No.

Oshkosh D-Handled Shovels

With Carbon Steel Blade

The handle is second growth Northern white ash and is fitted with a pressed steel D top.

Cat. No.	Each	Style of Blade	Wt. Lbs.	Extra Handles Cat. No.	Extra Handles Each	Extra Handles Wt. Lbs.
1092R	$2.04	Round Point	4	1093	$.63	2
1092S	2.04	Square Point	4	1093	.63	2

With Alloy Steel Blade

The handle is of clear straight grained ash, sharply bent, and fitted with a steel D top.

2092R	$2.19	Round Point	4	2093	$.63	2
2092S	2.19	Square Point	4	2093	.63	2

No. 920 Oshkosh Brush Hooks

For clearing right of ways for power lines or for clearing land of brush. It takes the place of an axe and scythe. It cuts small seedlings, bushes, and small trees easily.

Made of a crucible steel particularly suitable for this tool. The eye or socket is securely welded to blade. The back strap eliminates the necessity of wedging the handle in the eye and holds the handle to the blade tightly. The handle is a high quality axe handle.

Weight, 4½ pounds.

No. **920** .... each ....

No. 897 Oshkosh Folding Take-Up Reels

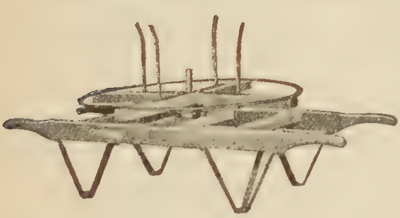
The reel part collapses and automatically throws off the coil at the same time and in an instant is ready for another coil. The frame, made of heavy hardwood, is strong and heavily reenforced throughout and folds up like a hinge.

It can be taken down in a moment merely pulling the pin out of the shaft, throwing off the coil and folding up the frame.

Take-up, 21 inches. Weight, 41 pounds.

Price, No. **897** .... each **$42.30**

Oshkosh Barrow Reels



Made of hard rock maple strongly reinforced with angle iron braces. Rests on strong steel legs. Has a large diameter pivot and is made for heavy work.

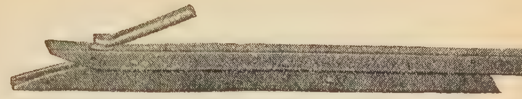
Cat. No.	Description	Wt., Lbs. Each	Price Each
900	Barrow Reel Only	80	**$46.40**
901	Extra Pins, per Set of 4	4	5.60

Oshkosh Pay-out Reels

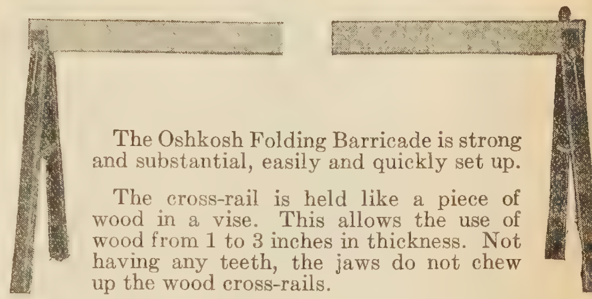
Made of hard maple, well constructed and re-enforced throughout.

Cat. No.	Wt., Lbs. Each	Price Each
902	40	**$27.80**

Oshkosh Folding Barricades



Folded



The Oshkosh Folding Barricade is strong and substantial, easily and quickly set up.

The cross-rail is held like a piece of wood in a vise. This allows the use of wood from 1 to 3 inches in thickness. Not having any teeth, the jaws do not chew up the wood cross-rails.

It is easily and quickly taken down and folded into a small, compact bundle which stacks easily and safely.

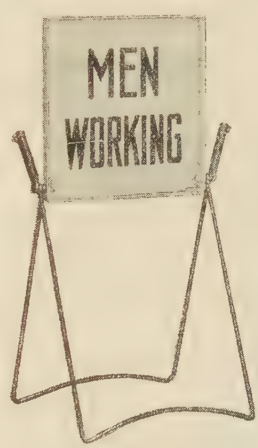
The screw handle is made of pipe and forms a socket for holding a danger flag. The socket is 4 inches deep.

A lantern lock is welded to the screw handle of each barricade. The lock itself is a set screw which is screwed outward to release the lantern and screwed to lock the lantern.

Orange finish.

Size .... inches	**32**	**42**
Per Pair	**$6.00**	**$6.34**
Height .... inches	32	42
Width (Bottom Open) ...... inches	20½ to 22¾	25 to 29
Size Folded .... inches	3x2x35	3x2x44
Weight .... pounds	25	32

Oshkosh Warning Signs



This warning sign is light in weight, yet durable. Legs are of ½-inch high carbon steel. Has 1¼-inch flange around edge of lettered side.

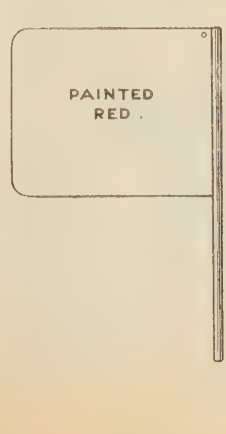
Has two hollow handles for adjusting angle of the legs. These handles also serve as flag sockets, and each is equipped with a lantern lock.

Black letters, 5½ inches high, on traffic yellow background.

Height, 43 inches.
Width, 28 inches.
Thickness, 1¼ inches.
Size folded, 28x28x1¼ inches.
Weight, 23 pounds.

Warning Sign .... each **$6.00**

Oshkosh Metal Flags



This metal flag is light and strong. It is made of 16-gauge steel welded to a ⅝-inch hollow iron staff. The flag is painted bright red and the staff black. The little peg hole near the top is for conveniently hanging it up in the truck.

The Oshkosh Warning Sign and the Oshkosh Folding Barricade have handy sockets to accommodate this flag.

Staff, 20 inches high.

Size of flag, 12x10 inches.

Metal Flag .... each **$.67**

Oshkosh Safety Extension Ladders

A light weight, safety extension ladder designed expressly for public utilities.

Equipped with an automatic safety lock or latch. This lock is so arranged that when pulling on the raising rope, the lock is lifted out of position. The instant the strain on the rope is slackened, the lock drops in place. In lowering, the extension must be lowered slowly. It cannot accidentally drop.

The side rails are made from straight grained, properly seasoned aeroplane spruce.

The rungs are made from tough mountain hickory, straight grained. Each rung has a shouldered tenon joint which is pressed tightly into the side rails, assuring a safe, tight fit. The side rails of each section are connected at top, middle, and bottom with steel tie-rods. This combination makes a rugged, durable construction. Either section can be used separately as an individual ladder, both being equipped with safety tips and pikes.

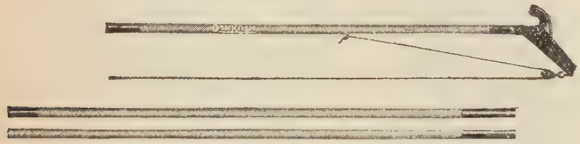
Other safety features include rubber faced tips, transparent safety finish, safety pole-grippers, and rubber guarded safety pikes. All metal parts are parkerized.

Furnished in full range of lengths.

Weight, 2 pounds per foot, average.

Safety Extension Ladder....per ft. **$1.14**

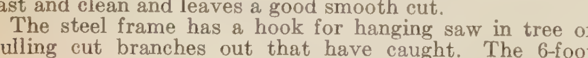
No. 915 Oshkosh Tree Trimmers



The Oshkosh Tree Trimmer is light and strong.
The head is made of two pieces of light forged steel reinforced and riveted together. These sides act as a guide for the thin saw steel cutting blade.
The blade is pivoted and starts cutting with a slicing motion the moment the rope is pulled. It cuts limbs up to 1½ inches in diameter.
The handle is made in three sections of 1½-inch straight grained, clear Washington Fir. One 6-foot section is attached to head, and two 7-foot lengths equipped with positive couplings of rigid construction, yet easily dismantled.
Furnished complete with handle and short section of rope.

No. **915**, Trimmer Complete, wt., 13 pounds....each **$10.68**
No. **915B**, Blade, wt., 10 ounces................each **2.67**
No. **915S**, Spring, wt., 2 ounces................each **.47**
No. **915EM**, Middle Extension, wt., 4 pounds...each **2.96**
No. **915EE**, End Extension, wt., 4 pounds......each **1.92**
No. **915R**, 20 Feet of Rope, wt., ¼ pound......each **1.54**

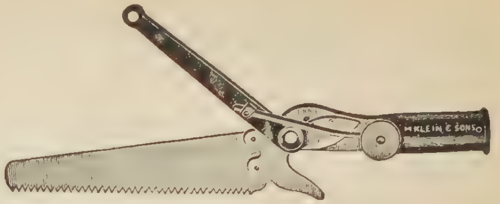
No. 916 Oshkosh Tree Saws



The saw blade is a strong, thin, fine tooth blade. It cuts fast and clean and leaves a good smooth cut.
The steel frame has a hook for hanging saw in tree or pulling cut branches out that have caught. The 6-foot handle has a ferrule on bottom to which can be connected the regular extensions of the Oshkosh Tree Trimmer.

No. **916**, Tree Saw, weight, 5 pounds............each **$8.38**
No. **916B**, Saw Blade, weight, ¼ pound.........each **.67**
No. **916T**, Saw Tightener, weight, ¼ pound.....each **1.54**

No. 3600 Klein's Favorite Tree Trimmer



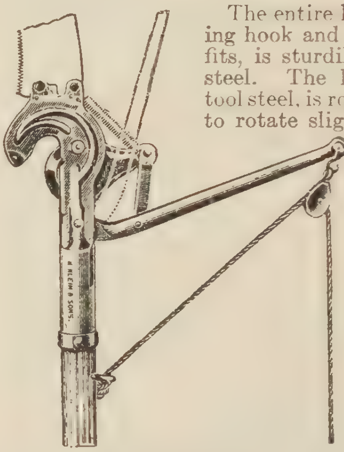
Will sever a one inch branch.
Knife is held open by a flat steel spring and is operated by a rope attached to the end of the lever.
Head is one piece and comprises the hook portion with which the knife engages and the socket into which the handle is inserted. This socket is straight, eliminating the necessity of tapering the end of the handle.
Knife forged from tool steel and is integral with lever.

No.	Each	Size Over All, In.	Wt.
3600–20	**$8.50**	17, without saw....................	3½
3600–21	**11.00**	23, with saw......................	4

Tree Trimmer Handles

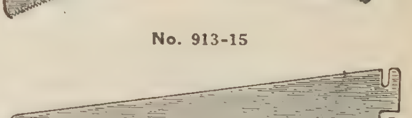
Length, 18 feet, brass ferrules.
No. **3601–6**, Wt., 10½ Lbs., 3 Sections..........each **$9.00**
No. **3601–9**, Wt., 9¾ Lbs., 2 Sections...........each **7.50**

No. 3628 Klein Tree Trimmers

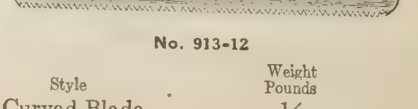


The entire head of this tool, comprising hook and socket into which handle fits, is sturdily constructed of pressed steel. The knife, made of tempered tool steel, is round in shape and arranged to rotate slightly with each cut, thus providing the entire circumference of the blade for cutting and giving an edge more than 3 times the length of that on the ordinary blade.
The leverage makes this trimmer cut the heavier branches quite easily. Knife may be readily removed for sharpening or renewal. Two threaded holes are provided for attaching saw.
Size over all, 12½ inches. Weight, 3½ pounds.
Price, No. **3628**, Trimmer......................each **$8.50**

No. 913-15 Klein Tree Trimmer Saws



No. 913-15



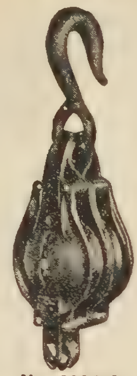
No. 913-12

No.	Style	Weight Pounds	Price Each
913-15	Curved Blade	½	**$2.50**
913-12	Straight Blade	⅜	**2.50**

B & L Star Brand Public Utility Star Metal Blocks for Manila Rope

Malleable Iron Shells—Loose Side Hooks and Beckets

No. 2325-A
Single



No. 2326-A
Double

No. 2327-A
Triple

Hooks are drop-forged of special steel and of extra large size and strength. The shell is certified malleable iron—carefully rounded and without sharp projection and constructed to prevent rope jamming between the shell and sheaves.

Double blocks of all sizes have full center straps, and all straps extend through the entire length of the block so all becket strain is borne by the straps not the shell.

Pin ends are entirely covered by recess in sides of the shell, allowing the block to be used on the ground or to pass any protruding object, when raising or lowering without interference.

Sheaves are of standard tackle block dimensions, and can be supplied japanned or galvanized, with any style bushing.

Blocks can be supplied promptly in all sizes. Supplied with any connection, including safety link.

Sheaves in 8-inch blocks and smaller are same sizes as in regular mortise wood blocks. Sheaves in 9-inch blocks and larger are same sizes as in wide mortise wood blocks.

Dimensions, Inches			All Japanned — Each			All Galvanized — Each		
Size Sheaves	Diam. Rope	Length Shell	Single	Double	Triple	Single	Double	Triple
Iron Bushed								
1¾x ½x⅜	⅜	3	$1.10	$1.60	$2.10	$1.20	$1.75	$2.30
2 x ⅝x⅜	½	3½	1.20	1.75	2.35	1.30	1.95	2.60
2¼x ⅝x⅜	½	4	1.30	1.85	2.60	1.45	2.05	2.90
3 x ¾x⅜	⅝	5	1.65	2.50	3.30	1.90	2.85	3.85
3½x1 x½	¾	6	2.00	3.10	4.20	2.35	3.65	5.00
4¼x1 x½	⅞	7	2.65	4.10	6.00	3.15	4.85	7.20
4¾x1⅛x⅝	1	8	3.25	5.40	7.40	4.00	6.70	9.15
5½x1⅜x⅝	1⅛	9	4.60	7.30	10.00	5.65	9.00	12.25
6¼x1½x¾	1¼	10	5.50	9.00	12.00	6.80	11.10	14.90
8 x1⅝x¾	1⅜	12	8.40	13.70	19.80	10.50	17.00	24.20
9½x1⅞x⅞	1½	14	15.50	28.00	38.50	18.50	32.60	44.90
Patent 6-Roller Bushed								
1¾x ½x⅜	⅜	3	$1.30	$2.10	$2.60	$1.40	$2.25	$2.80
2 x ⅝x⅜	½	3½	1.40	2.35	3.00	1.50	2.55	3.25
2¼x ⅝x⅜	½	4	1.50	2.50	3.40	1.65	2.70	3.70
3 x ¾x⅜	⅝	5	2.00	3.10	4.35	2.25	3.45	4.90
3½x1 x½	¾	6	2.40	3.90	5.40	2.75	4.45	6.20
4¼x1 x½	⅞	7	3.05	4.90	6.85	3.55	5.65	8.05
4¾x1⅛x⅝	1	8	3.85	6.60	9.20	4.60	7.90	10.95
5½x1⅜x⅝	1⅛	9	5.25	8.95	11.80	6.30	10.65	14.05
6¼x1½x¾	1¼	10	7.00	10.90	14.85	8.30	13.00	17.75
8 x1⅝x¾	1⅜	12	10.20	17.50	25.00	12.30	20.80	29.40
9½x1⅞x⅞	1½	14	17.50	30.00	41.50	20.50	34.60	47.90
Graphite-Bronze Bushed, Self-Lubricating								
1¾x ½x⅜	⅜	3	$1.60	$2.65	$3.40	$1.70	$2.80	$3.60
2 x ⅝x⅜	½	3½	1.70	2.90	3.85	1.80	3.10	4.10
2¼x ⅝x⅜	½	4	1.80	3.15	4.25	1.95	3.35	4.55
3 x ¾x⅜	⅝	5	2.35	3.80	5.40	2.60	4.15	5.95
3½x1 x½	¾	6	3.10	5.25	7.20	3.45	5.80	8.00
4¼x1 x½	⅞	7	3.60	5.90	8.40	4.10	6.65	9.60
4¾x1⅛x⅝	1	8	4.55	7.65	10.70	5.30	8.95	12.45
5½x1⅜x⅝	1⅛	9	5.90	10.30	13.85	6.95	12.00	16.10
6¼x1½x¾	1¼	10	7.75	12.85	17.55	9.05	14.95	20.45
8 x1⅝x¾	1⅜	12	11.00	19.00	27.20	13.10	22.30	31.60
9½x1⅞x⅞	1½	14	18.00	31.00	43.00	21.00	35.60	49.40

B & L Star Brand Public Utility Snatch Blocks

Wrought Iron Shell—For Manila Rope, Boston Pattern

No. 2356

Has malleable iron shell, extra heavy drop-forged flatted stiff swivel hooks, wrought iron straps, safety-locking link and smooth rounded edges to prevent chafing rope.

Blocks furnished with sheaves for wire rope if desired.

Size Sheave Inches	Star Graphite Bushed Self-Lub. Each	5-Roller Bushed Each	Star Metaline Bushed Self-Lub. Each	For Rope Diam. Inches	Length Shell Inches
3 x1⅛x ½	$4.50	$5.15	$5.75	⅞	6
3½x1¼x ½	5.50	6.25	6.75	⅞	7
4½x1⅜x ⅝	6.50	7.35	8.00	1	8
5 x1⅜x ⅝	7.50	8.50	9.25	1⅛	9
5¾x1⅞x ¾	10.00	11.50	12.50	1¼	10
6¾x2⅛x ¾	12.50	14.00	15.50	1½	12
8 x2¼x ⅞	16.00	18.00	19.50	1¾	14
9 x2⅝x1	21.00	24.00	26.00	2	16

B & L Star Brand Public Utility Snatch Blocks

Wood Shell—For Manila Rope

Boston Pattern

No. 2355

Has drop-forged flatted stiff swivel hooks.

All connections drop-forged, shells double cross bolted and the bow straps extend to the bottom of the shell.

Size Sheave Inches	Star Graphite Bushed Self Lub. Each	Self-Adj. 5-Roller Bushed Each	Star Metaline Bushed Self-Lub. Each	Rope Diam. Inches	Length Shell Inches
3 x1⅛x ½	$4.00	$4.65	$5.25	⅞	6
3½x1¼x ½	4.75	5.50	6.00	⅞	7
4½x1⅜x ⅝	5.75	6.60	7.25	1	8
5 x1⅜x ⅝	6.75	7.75	8.50	1⅛	9
5¾x1⅞x ¾	8.50	10.00	11.00	1¼	10
6¾x2⅛x ¾	10.00	11.50	13.00	1½	12
8 x2¼x ⅞	13.00	15.00	16.50	1¾	14
9 x2⅝x1	17.00	20.00	22.00	2	16

B & L Star Brand Stringing Snatch Blocks

With Drop Link or Boston Self-Locking Links
Aluminum Conductor

Made almost entirely of aluminum. Used in stringing aluminum conductors, as a harder metal might result in abrasion of the expensive conductor.

PU-32

The main strain is taken througn the drop-forged swivel hook attached to the drop-forged steel strap with the self-locking latch, but these parts are far enough from the conductors so they never come in contact.

Made in several sizes and fitted with special Lynite 6-roller bearing sheaves.

7-Inch Sheave Blocks for Nos. 2/0 to 300,000 C.M. Aluminum Cable, Weight 13½ Lbs...each	**$8.50**
10-Inch Sheave Blocks for 336,400 to 500,000 C.M. Aluminum Cable, Wt. 18 Lbs...each	**12.50**
14-Inch Sheave Blocks for 500,000 C.M. Aluminum Cable, and larger. Wt. 37 Lbs...each	**21.25**

Other sizes made to specification; prices upon application.

B & L Star Brand Stringing Snatch Blocks

Wood Shell

PU-38

Equipped with specially designed 6-roller bearing sheaves to insure freedom of action, as any failure would create a dangerous abrasion of the conductors.

This method may be carried out with standard commercial snatch blocks, but one block jamming would cause damage to the conductor, even though the remaining blocks were functioning properly.

These blocks are made with special wide throats when so desired, so as to accommodate any large splicing that may run over the sheave.

7-Inch Sheave Blocks for Nos. 2/0 to 300,000 C.M. Aluminum Cable.
7-Inch Sheave Blocks for 1 to 188,700 Copper Cable
10-Inch Sheave Blocks for 336,400 to 500,000 C.M. Aluminum Cable.
10-Inch Sheave Blocks for 4/0 to 314,500 Copper Cable.

Other sizes to specification; prices on application.

B & L Star Brand Public Utility Snatch Blocks for Wire Rope

Drop Forged Flatted Stiff

Swivel Hooks, Heads and Links

This block is designed especially for truck winch work. Built rugged to stand hard service and heavy loads, and light enough to be easily handled by the screw.

It is all galvanized.

Larger and smaller sizes of this block can be furnished if desired.

Size Sheave.in.	6x1x¾	8x1¼x⅞	10x1¼x1
Weight.pounds	15	32½	52
Each..........	**$5.85**	**7.80**	**11.70**

B & L Star Brand Public Utility Snatch Blocks

Eastern Pattern—Malleable Shells

For Manila Rope

No. 2357
Closed

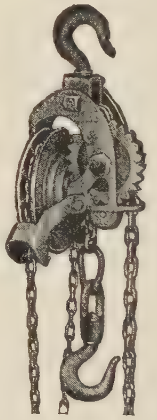
No. 2358
Open

Has malleable iron shell, extra heavy drop-forged flatted stiff swivel hooks, wrought iron straps, safety-locking link and smooth rounded edges to prevent chafing rope.

Blocks furnished with sheaves for wire rope if desired.

Size Sheave Inches	Star Graphite Bushed Self-Lub. Each	5-Roller Brushed Each	Star Metaline Bushed Self-Lub. Each	For Rope Diam. Inches	Length Shell Inches
3 x1⅛x ½	$4.50	$5.15	$5.75	⅞	6
3½x1¼x ½	5.50	6.25	6.75	⅞	7
4½x1⅜x ⅝	6.50	7.35	8.00	1	8
5 x1⅜x ⅝	7.50	8.50	9.25	1⅛	9
5¾x1⅞x ¾	10.00	11.50	12.50	1¼	10
6¾x2⅛x ¾	12.50	14.00	15.50	1½	12
8 x2¼x ⅞	16.00	18.00	19.50	1¾	14
9 x2⅝x1	21.00	24.00	26.00	2	16

Improved B & L Star Chain Hoists



The principle of the B & L Hoist operation is extremely simple and the points of contact of the scroll on hand wheel and load gear teeth are machined to an accurate fit.

Improved construction methods eliminate the possibility of spreading the load gear teeth being engaged at exact depth by scroll, even after long wear, and with overload.

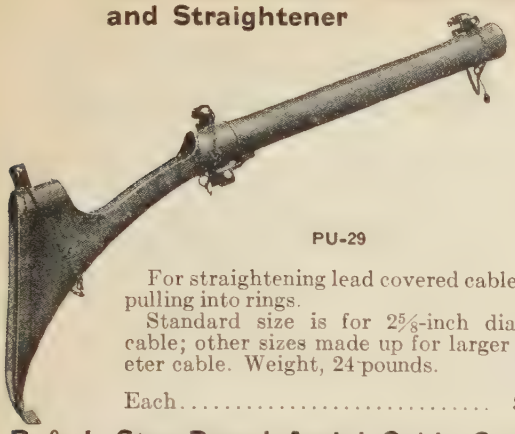
It is fully equipped with radial and thrust ball bearings. It has only 2 moving parts. It holds its load securely at any point without a brake. All parts are interchangeable, being built and assembled by precision methods. It is light, safe and portable. It is compact with low head room. The drop-forged steel hooks are proof-tested. It is automatically lubricated and operates with perfect smoothness. Chains are the finest obtainable and fit the wheels correctly.

Hoist is tested to twice its rated capacity before shipment. In efficiency of operation the B & L Improved Star Chain Hoist compares favorably with the most expensive geared hoists.

Capacity Hoist Pounds	Power Required to Lift Full Load Pounds	Regular Lift Feet	Weight Pounds Hoist Complete	Price Each
500	30	8	38	**$45.00**
1000	52	8	47	**50.00**
2000	92	8	65	**60.00**
3000	110	8	96	**80.00**
4000	130	9	133	**100.00**
6000	123	10	147	**110.00**
8000	135	10	188	**130.00**
12000	200	12	341	**230.00**

The 6000-pound capacity and larger sizes have foot blocks.

B & L Star Brand Aerial Cable Guide and Straightener



PU-29

For straightening lead covered cable while pulling into rings.

Standard size is for 2⅝-inch diameter cable; other sizes made up for larger diameter cable. Weight, 24 pounds.

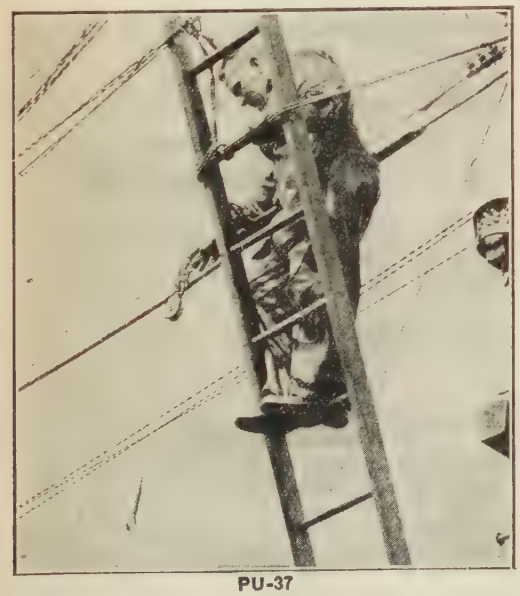
Each..... $21.40

B & L Star Brand Aerial Cable Cars

PU-36

Weight, 21¼ pounds.....Each $15.00

B & L Star Brand Aerial Hand Lines

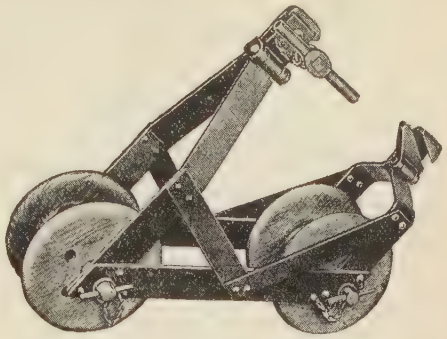


PU-37

Consists of one 3-inch single roller bushed galvanized hollow steel block, 2 snap hooks, ring and rope.

Blocks Only without Rope	each	$3.20
Complete with 60 Feet of ⅜-Inch Manila Rope	each	5.00
Complete with 75 Feet of ⅜-Inch Manila Rope	each	5.45
Complete with 60 Feet of ½-Inch Manila Rope	each	6.00
Complete with 75 Feet of ½-Inch Manila Rope	each	6.65

B & L Star Brand Aerial Cable Guides With Wood Rollers

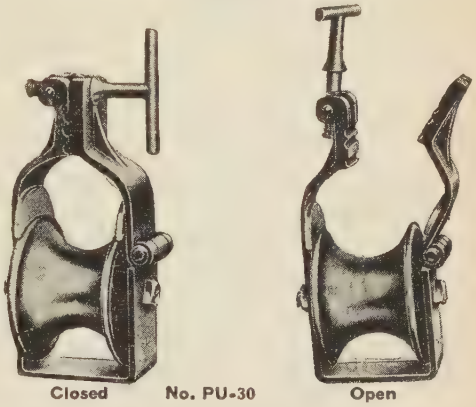


No. PU-39

For pulling lead covered cable into supporting rings.

Each, Weight 32 Pounds..... $24.00

B & L Star Brand Single Sheave Cable Blocks



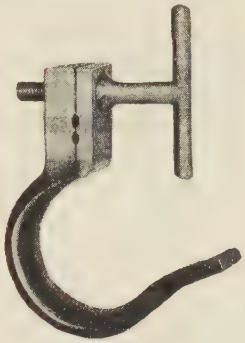
Closed No. PU-30 Open

For guiding winch lines in conjunction with aerial cable guides.

Standard for 2⅝-inch diameter cable. Other sizes made up for larger diameter cable.

Each, Weight 11 Pounds..... $6.45

B & L Star Brand Booster Hooks

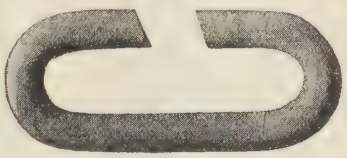


No. PU-31

For relieving load on rings when pulling long spans.

Each, Weight 3 Pounds..... $2.15

B & L Star Brand C Hooks

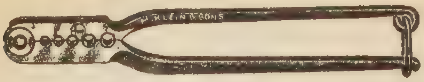


No. PU-28

Steel forging for connecting load to winch line.

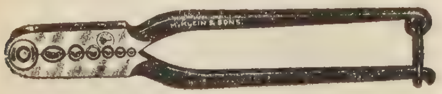
Each, Weight 2½ Pounds..... $2.00

No. 102-1 Klein's Splicing Clamps



This clamp is arranged with five round holes for bare wire. For copper wire Nos. 8, 10, 12, 14, 16, A.W.G. For iron wire Nos. 10, 12, 14, 16, 18, B. W. G. Length 8 inches.
Price, No. **102–1** . . . . each **$5.20**

No. 102-3 Klein's Splicing Clamps



Large hole can be used for guy wire or messenger strand.
Copper wire Nos. 2, 4, 6, 8, 10 and 12 A. W. G.
Iron wire Nos. 4, 6, 8, 10 and 12 B. W. G.
No. **102–3**, 10¾-Inch. Wt. per Doz., 15 lbs. . . . each **$6.70**

No. 102-30 Klein's Splicing Clamps

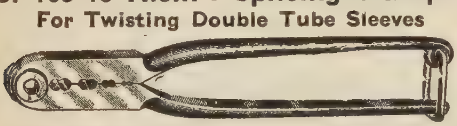
Holes reversed for those who prefer this arrangement.
Copper wire Nos. 2, 4, 6, 8, 10, 12 A. W. G.
Iron wire Nos. 4, 6, 8, 10, 12, 14 B. W. G.
No. **102–30**, 10¾-Inch. Wt., per Doz., 15 lbs. . . . each **$6.70**

No. 102-48 Klein's Splicing Clamps

Largest hole convenient to bring together guy strand before applying a three bolt clamp.
Copper wire Nos. 0, 2, 4, 6, 8 A. W. G.
No. **102–48**, 10¾-Inch. Wt., per Doz., 15 lbs. . . . each **$6.70**

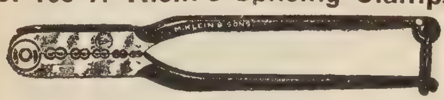
No. 105-15 Klein's Splicing Clamps

For Twisting Double Tube Sleeves



For copper sleeves Nos. 8, 10, 12, 14, 17, A.W.G.
For iron sleeves Nos. 10, 12, 14, 16, 19, B. W. G.
Price, No. **105-15,** Size 8-inch. . . . . each **$5.50**

No. 105-17 Klein's Splicing Clamps



Has five sets of chamber for twisting double tube sleeves.
For copper sleeves Nos. 6, 8, 10, 12, 14, 17, A.W.G.
For iron sleeves Nos. 8, 10, 12, 14 16, 19, B. W. G.
Price. No. **105-17**, Size 10¾-inch. . . . . each **$6.70**

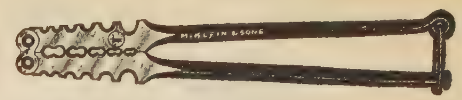
No. 105-31 Klein's Splicing Clamps

Three double chambers for twisting Nos. 10 and 12 A. W. G. sleeves, Nos. 12, 14, and 17 N. B. S. sleeves.
No. **105–31**, 8¼-Inch. Wt. per Doz., 10 lbs. . . . . . each **$5.50**

No. 107-34 Klein's Di-Stock Sleeve Twister

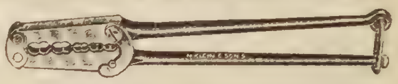
A hand operated cam lever closes the head securely on the sleeve—no thumb screws to bother with.
Tubular handles are furnished.
No. **107–34**, weight each, 9 Lbs.. . . . . each **$40.00**

No. 132-12 Klein's Combination Wire and Sleeve Clamps



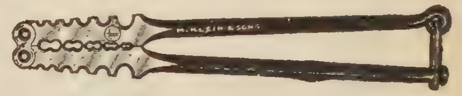
For telephone and telegraph general line and trouble work.
This clamp has four round holes for twisting bare wire.
Copper wire Nos. 6, 8, 10, 12, A.W.G.
Iron wire Nos. 8, 10, 12, 14, B. W. G.
The reverse side has four double chambers for twisting sleeves.
Copper sleeves Nos. 8, 10, 12, 14, 17, A.W.G.
Iron sleeves Nos. 10, 12, 14, 16, 19, B. W. G.
Hammer forged from high grade crucible tool steel. Oil tempered, polished head and black handle.
Weight per dozen, 10 pounds.
Price, No. **132-12**, Size, 9 inches. . . . . each **$7.00**

No. 132-47 Klein's Wire and Sleeve Clamps



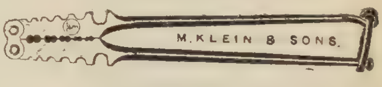
For single tube or oval copper sleeves. Nos. 2, 4, 6, 8, and .104.
Hinge has stop to prevent handles from opening beyond point convenient for clamping on sleeve.
No. **132–47**, Weight per Doz., 17 Lbs. . . . . each **$11.00**

No. 132-15 Klein's Combination Wire and Sleeve Clamps



The unusual range of wire and sleeve sizes covered by this clamp makes it practically a universal tool for telegraph, telephone and power line work. Has 5 round holes for twisting bare wire and an oval opening for guy wire or messenger strand. Copper wire Nos. 4, 6, 8, 10, 12, A.W.G. Iron wire Nos. 6, 8, 10, 12, 14, B. W. G. Strand opening .437x.624.
Reverse side has 5 chambers for twisting double tube sleeves. Copper sleeves Nos. 6, 8, 10, 12, 14, 17, A.W.G. Iron sleeves Nos. 8, 10, 12, 14, 16, 19, B. W. G.
Hammer forged from high grade crucible tool steel. Oil tempered, polished head and black handles.
Weight, per dozen, 16 pounds.
Price No. **132-15,** Size 11¼ inches. . . . . each **$9.50**

No. 132-46 Klein's Wire and Sleeve Clamps



One side for double tube copper sleeves Nos. 4, 6, 8, 10, and 12 A. W. G. Other side for copper wire Nos. 4, 6, 8, 10, and 12 A. W. G.
No. **132-46**, Weight per Doz., 15½ Lbs. . . . . each **$9.50**

No. 107 Klein's Di-Stock Sleeve Twisters

This tool has ample leverage for use on heavy wires beyond the capacity of standard splicing clamps or connectors. The illustration above shows the Di-Stock fitted for making double tube joints.

Forged from high grade crucible steel. Has swing latch provided with thumb nut to fit over reverse jaw to hold both jaws securely in place.

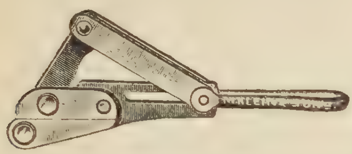
Open to Receive Wire

Special prices on any combination upon application. Specify sizes of sleeve tool is intended for.
Tools are made to order only. Weight, 4 pounds.
Price, No. **107-2**, for Sleeves. . . . . each **$26.00**

Klein's Chicago Grips

Main body piece and lever are forged steel. Draw parts are wrought steel. Gripping jaws are machined.

No. 1613 With Plain Jaw for Bare Wire



No.	Each	Description	Max. Open. In.	Wt. Lbs. Each
1613–30	$4.00	For No. 6 Wire and Smaller...	.2187	1½
1613–30B	6.00	With Bronze Lined Jaws......	.1875	1½
1613–40	8.00	For No. 0 Wire and Smaller...	.3125	2⅝
1613–40A	8.00	For No. 0 Strand and Smaller..	.375	2⅝
1613–40B	12.00	With Bronze Lined Jaws......	.3125	2¾
1613–50	13.50	For No. 0000 Wire and Smaller	.50	7½
1613–50A	13.50	For No. 0000 Strand and Smaller.........................	.625	7½
1613–50B	20.00	With Bronze Lined Jaws......	.50	7½

No. 1611 For Insulated Wire

No.	Each	Description	Max. Open. In.	Wt. Lbs. Each
1611–20	$7.50	For No. 4 Wire and Smaller..	.50	2¼
1611–20B	13.00	With Bronze Lined Jaws......	.50	2½
1611–30	9.50	For No. 00 Wire and Smaller	.5625	3¾
1611–40	15.00	For No. 0000 Wire and Smaller	.75	7¼
1611–50	15.00	For No. 0000 Triple Insulated..	.9375	7¼

No. 1626 Klein's Chicago Grips

For Aluminum Cable Steel Reinforced

Both gripping jaws are smooth.

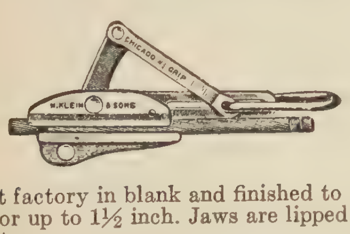
Safe load up to 3,750 pounds.

Weight, 7¾ pounds.

No.	Each	For Cable	Max. Open. In.
1626–39	$20.00	1/0 to 300,000 C.M...............	.75
1626–39B	27.00	With bronze lined jaws...........	.75
1626–40	20.00	4/0 to 500,000 C.M...............	.9688
1626–40B	27.00	With bronze lined jaws...........	.9375

No. 1628-30B Klein's Chicago Grips

For Hollow Core and Other Large Diameter Conductors



In stock at factory in blank and finished to fit any diameter conductor up to 1½ inch. Jaws are lipped out to avoid excess weight.

Forged from alloy steel, heat treated for maximum strength. Jaws are bronze lined.

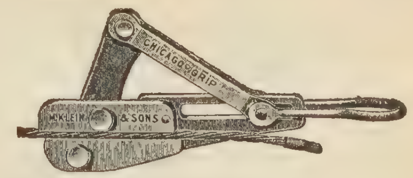
Maximum safe load, 20,000 pounds.

Weight, 23½ pounds.

No. **1628–30B**.................................each **$123.00**

No. 1628 Klein's Chicago Grips

For Messenger Strand and Heavy Cables



Forged from alloy steel heat treated. Gripping jaws are machined smooth. Rivets are machine turned.

No.	Each	For Strand	Safe Load	Max. Open. In.	Wt. Lbs. Each
1628–5	$14.00	2,200 to 10,000 Lbs.	6,000	7/16	5
1628–5B	27.00	With bronze lined jaws	6,000	.375	5
1628–6	22.40	2,200 to 6,000 Lbs.	8,000	13/32	8½
1628–6B	34.00	With bronze lined jaws	8,000	.50	8½
1628–16	44.70	10,000 to 16,000 Lbs.	15,000	11/16	14
1628–16B	60.00	With bronze lined jaws	15,000	.625	14

Klein's Chicago Grips

With Bronze Lined Jaws

Construction engineers are demanding grips that will not slip under heavy loads and which will not damage the conductor or strand. These requirements are met by welding a lining of bronze into the jaws of standard Chicago Grips, indicated by "B" following catalog number.

In order to make standard grips available for conductors of larger diameters they can be further modified by plating the lower jaws to required additional width and fitting an upper jaw of corresponding width, but in one piece, indicated by "BP" following catalog number.

Whether for copper, copper-weld, aluminum or aluminum cable steel reinforced (ACSR) or steel strand these grips will answer the problem.

Ascertain the maximum tension anticipated and the overall diameter of the conductor or strand to be used and consult the table below. All orders must state maximum tension load and overall diameter of conductor or strand.

These tools are made to order only. Parts are held in blank at factory and shipment can usually be made in from 14 to 21 days.

No.	Each	Max. Diam. Conductor	Max. Safe Load, Lbs.	Wt. Lbs. Each
1613–30B	$6.00	.1875	1,500	1½
1613–40B	12.00	.3125	2,250	2¾
1613–50B	20.00	.50	4,000	7½
1611–20B	13.00	.50	2,200	2½
1626–39B	27.00	.75	3,750	7¾
1626–40B	27.00	.9375	3,750	7¾
*1626AB	34.00	.8125	6,000	7¾
*1628–5B	27.00	.375	6,000	5
*1628–6B	34.00	.50	8,000	8½
†*1628–6BP	47.30	.75	8,000	9½
*1628–16B	60.00	.625	15,000	14
†*1628–16BP	73.30	1.125	15,000	15
*1628–30B	123.00	1.50	20,000	23½

*Forged from tough alloy steel, all parts heat treated so as to get maximum strength without excess weight.

†These grips are also plated to accommodate the larger diameter cables.

No. 1700-30 Klein's Chicago Linemen's Tools

Set is combination of Chicago Grip No. 1613–30 with Howes Wire Tool No. 1702–20.

For No. 6 wire and smaller down to No. 13.

No. **1700–30**, Weight, 4 lbs.....................each **$14.10**

Haven's Steel Grips

Almost automatic in action. Handle and eccentric allow instantaneous hold. A shake of the rope on the tackle disengages the grip.

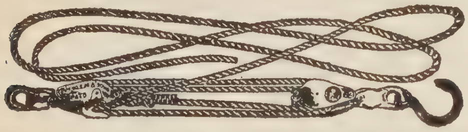
Price, No. **1604-10**, for No. 8 Wire and Finer....each **$4.00**
Price, No. **1604-20**, for ½-inch Wire and Finer...each **6.00**

Improved Haven's Grips

For plain or stranded wire No. 6 to ¾-inch diameter. Made with swing latch which engages stud on lower jaw.

No. **1625-20**....................each **$14.00**

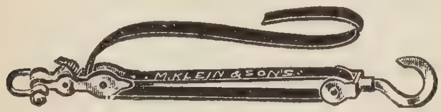
No. 1802-30 Klein's Self-locking Troublemens' Blocks



Especially for use with Klein's Wire Grips. No. 1802–30 is furnished with 25 feet ⅜-inch Manila rope, 2½ pounds. Consists of light steel shell blocks galvanized, fitted with snubbing hook to lock load in any position. To lock load, pull luff rope under hook. To release, simply pull rope. Blocks are arranged with spring guard snap hooks. When pulling up wire to make a splice, it may be used with two grips attached to snaps or with hook to anchor to an insulator-pin or other convenient anchorage.

Cat. No.	Description	Wt. Lbs.	Price per Set
1802–30	Galv., with 25 Ft. ⅜-inch Rope......	2½	$7.20

No. 1702-20 Klein's Howes Wire Tools



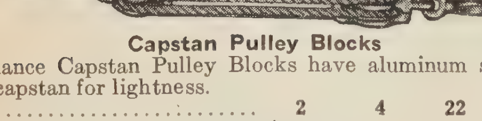
The strap is harness leather 1¼ inches wide and 7 feet long. At one end a forged steel swivel hook is provided with opening to permit anchoring round insulator pin. The forward end has a locking device to hold the load at any distance and is so arranged that a wire grip can be readily attached.

The metal parts are galvanized.

Weight per set, 2 pounds.

Price, No. **1702-20**, Single Purchase... ...per set **$10.00**

Chance Capstan Pulley Blocks and Detachable Capstans



Capstan Pulley Blocks

Chance Capstan Pulley Blocks have aluminum sheaves and capstan for lightness.

No.	**2**	**4**	**22**	**44**
Each	**$27.00**	**40.00**	**37.00**	**55.00**
Capacity....pounds	2000	4000	3000	5000
Size of rope....inches	½	⅝	½	⅝
Weight....pounds	15	25¼	19¼	31¼

Detachable Capstans

No.	**3**	**5**
Each	**$17.00**	**28.00**
Capacity....pounds	2000	4000
Weight....pounds	5	5

No. 1802 Klein's Heavy Block Tackles

Drop Forged Hooks and Eye

Consist of two special double sheave blocks.

Spring guarded snap hooks do away with taping.

Pulleys are bronze bushed and self lubricating.

Furnished with best quality Manila rope, 4 strand.

No. **1802–40,** 30 Ft. of ½ In. Rope..............each **$18.50**
No. **1802–50,** 30 Ft. of ⅝ In. Rope..............each **20.50**
No. **1802–60,** 30 Ft. of ¾ In. Rope..............each **21.50**

No. 1803 Klein's Hand Lines

Rope is best quality Manila and does not twist. Spliced to eye of snap hook with galvanized steel thimble.

Snap hook is drop forged and similar to those used on safety straps except that it has round eye.

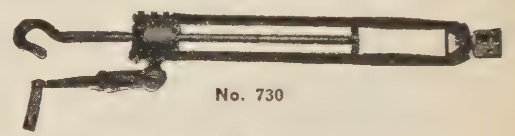
No. **1803–60,** 75 Ft. of ⅜ In. Rope..............each **$8.50**
No. **1803–120,** 120 Ft. of ⅜ In. Rope............each **11.20**

Klein's Snap for Hand Lines

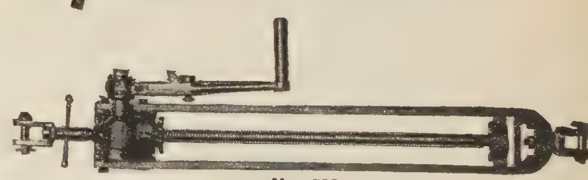
Is used on hand lines, 1803 series.

No. **443A**, Forged Snap, Eye 1$\frac{1}{16}$ In. I. D.......each **$2.50**

Matthews Quick Release Slack Pullers



No. 730



No. 732

Enables one man to do the work of four when taking the slack out of guy strand, messenger wire or changing strain insulators, or for splicing trolley wire, telephone or power cable under tension; also used for pulling back underground cable. Takes the place of block and tackle. One man can easily pull 3000 pounds with the No. 730, 6000 pounds with the Nos. 731 or 732, and 10000 pounds with the Nos. 7100 or 7110. No slack is lost in dead ending as strain is held to the exact point pulled.

With the new quick release feature, when the entire take-up has been used, the wire is temporarily dead ended and the lock released. This permits the slack puller to be immediately extended to its maximum or any intervening length.

No.	Description	Ship. Wt. Lbs.	Price Each
730	Maximum Take-Up, 19 Inches...........	17	**$50.00**
731	Same as No. 730, Except That Clevis is Substituted for Hook..................	17	**54.00**
732	Same as No. 731, Except That it Also Has Quick Take-Up Feature...............	17	**58.00**
7100	Maximum Take-Up, 27 Inches...........	45	**95.00**
7110	Same as No. **7100**, Except That it Also Has Quick Take-Up Feature...............	45	**112.00**

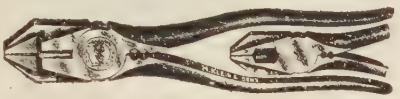
The 730, 731 and 7100 do not have the quick take-up feature.

No. 201 Klein's Side Cutting Pliers

Diamond Special for use on bare and insulated wire.

Cat. No.	201-5	201-6	201-7	201-8	201-9
Size.....inches	5	6	7	8	9
Price.....each	$4.20	4.50	5.30	5.80	7.10

No. 212 Klein's Side Cutting Pliers
With Sleeve Joint Twisters



Diamond Special for use on bare and insulated wire, with sleeve joint twister.

Cat. No.	212-6	212-7	212-8
Size.....inches	6	7	8
Price.....each	$5.30	6.00	7.10

No. 201 Klein's Side Cutting Pliers

Nose and all edges rounded and shoulder of head removed.

No.	201-6NE	201-7NE	201-8NE	201-9NE
Each	$4.50	$5.30	$5.80	$7.10
Wt. Lbs. per Doz.	5	7½	12	12½

No. 202 Klein's Oblique Cutting Pliers

Cuts close, the narrow head permitting its use in confined places.

Knives are perfectly fitted. Lap joint type.

No. **202-5**, Length, 5 Inches.....each **$3.60**
No. **202-6**, Length, 6 Inches.....each **4.00**

No. 245 Klein's Oblique Cutting Pliers

Can easily be carried in vest pocket.

For electricians, telephone men and switchboard builders.

No. **245-5**, 5-Inch, Weight per Doz., 4 Lbs....each **$3.60**

No. 202 Klein's Narrow Nosed Oblique Pliers

This plier has narrow hinge and pointed nose. For telephone and radio work.

No. **202-5A**, 5-Inch, Weight per Doz., 4 Lbs....each **$3.60**
No. **202-6A**, 6-Inch, Weight per Doz., 4¼ Lbs..each **4.00**

No. 240 Klein's Oblique Cutting Pliers
With Wire Stripping Notch

Has notch for stripping small wires placed 3/16 inch from hinge and has diameter of .052 inch.

No. **240-5**, 5-Inch, Weight per Doz., 4 Lbs.....each **$4.00**
No. **240-6**, 6-Inch, Weight per Doz., 4¼ Lbs....each **4.60**

No. 242-6 Klein's Oblique Cutting Pliers

Heavy pattern.

For use where it is not necessary to reach into confined spaces.

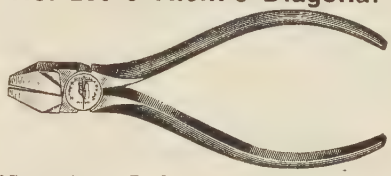
No. **242-6**, 6 Inch, Weight per Doz., 4¼ Lbs.....each **$4.10**

No. 232 Klein's End Cutting Pliers

Stout jaws and broad cutting knives.

No.	Each
232-5½	$6.00
232-7	6.70

No. 235-6 Klein's Diagonal Cutting Pliers



Has long cutting knives. Head is narrow to permit use in confined spaces.

Has polished head, handles temper blued.

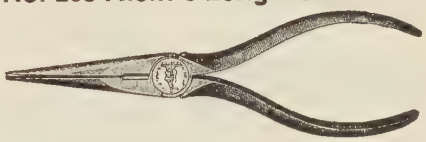
No. **235-6**, 6 Inch, Weight per Doz., 4½ Lbs.....each **$6.00**

No. 301 Klein's Long Nose Pliers, without Cutters

Adapted for stripping the ends of insulated wire, and for work in confined spaces.

Price, No. **301-5**, Length, 5 Inches.....each **$3.20**
" " **301-6** " 6 " ..... " **3.50**

No. 203 Klein's Long Nose Side Cutting Pliers



Designed for work in restricted spaces.

Equipped with cutting knives.

Price, No. **203-5**, Length 5 Inches.....each **$3.80**
" " **203-6** " 6 " ..... " **4.20**

No. 203-8 Klein's Long Nose Cutting Pliers

Made for use with heavier gauge insulated wire.

The round nose is for forming loops and a flat space is provided ahead of the knife for holding objects securely or for cracking insulation.

No. **203-8**, Weight per Doz., 8 Lbs.....each **$5.80**

No. 203-8N Klein's Long Nose Cutting Pliers

This plier is same as 203-8 but is fitted with stripping notch in knife. Notch is regularly furnished to take No. 12 A. W. G. insulated wire but can be varied for other sizes to order.

No. **203-8N**, Weight per Doz., 8 Lbs.....each **$6.00**

No. 316 Klein's Long Nose Pliers

Particularly adapted for telephone work. Jaws are 2 inches long with 1/16-inch point. Handles are 4 inches long, tempered blue. Polished head and jaws.

Size, 6 inches.

Price, No. **316-6** Weight per Dozen, 2¾ Pounds..each **$3.50**

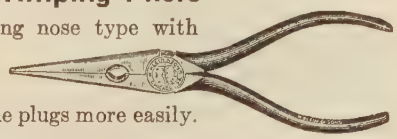
No. 316-S Klein's Long Nose Pliers

With Sleeve Opening

Jaws are 2 inches long with 1/16-inch point. Has openings for No. 17 B.&S. double tube copper sleeves. Handles 4 inches long, tempered blue; polished head and jaws.

Price, No. **316-S**, Size 6 Inches.....each **$4.00**

No. 301-C Klein's Long Nose Cord Crimping Pliers



This plier is a long nose type with special opening for crimping switchboard cords to make them fit into the plugs more easily. Size, 6 inches.

Price, No. **301-C**, Weight per Dozen, 2¾ Pounds...each **$4.00**

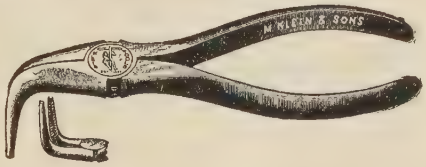
No. 303-6 Klein's Long Needle Nose Pliers

Long nose permits use in confined spaces. Has polished head and handles temper blued.

Weight per dozen, 3 pounds.

Price, No. **303-6**, Length 6 Inches.....each **$3.50**

No. 302 Klein's Long Curved Nose Pliers



Angle is arranged to give full clearance and prevent skinning of knuckles.

Price, No. **302-6**, Length, 6 inches.....each **$4.50**

No. 305-6 Klein's Long Flat Nose Pliers

Has long wide flat nose. Inside of jaws left smooth if desired. Has polished head and handles temper blued. Weight per dozen, 3½ pounds.

Price, No. **305-6**, Length 6 Inches.....each **$3.80**

No. 206-6 Klein's Long Flat Nose Side Cutting Pliers

Has long wide flat nose and cutting knives. Smooth jaws if desired. Has polished head and handles temper blued. Weight per dozen, 3½ pounds.

Price, No. **206-6**, Length 6 Inches.....each **$4.00**

Klein's Long Flat Nose Spring Adjusting Pliers

Hollow ground on outside of jaws to reach between and grasp springs easily.

No. **311-5½**, 5½ Inch, Weight per Doz., 3¼ Lbs.each **$3.80**

No. 304-6 Klein's Long Duck Bill Pliers

For general use. Jaws are wider and heavier than those of flat nose pliers.

Has polished head and handles temper blued.

Weight per dozen, 3¼ pounds.

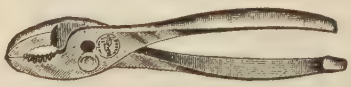
Price, No. **304-6**, Length, 6 Inches.....each **$3.80**

No. 205-6 Long Duck Bill Side Cutting Pliers

General use. Jaws are wider and heavier than those of flat nose plier. Has polished head and handles temper blued. Weight per dozen, 3 pounds.

Price, No. **205-6**, Length, 6 Inches.....each **$4.20**

No. 406-6½ Klein's Slip Joint Pliers



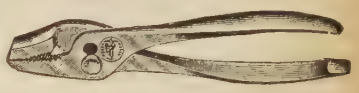
This plier embodies all the advantages offered by a tool of this type. Has a wire cutter and a screwdriver handle. Has polished head and handles temper blued.

Weight per dozen, 7 pounds.

Price, No. **406-6½**, Length, 6½ Inches.....each **$2.00**

No. 407-7 Klein's Utility Slip Joint Pliers

Heavy duty type. Adaptable as pipe wrench or wire cutter. Has sure grip jaws for irregular shapes.

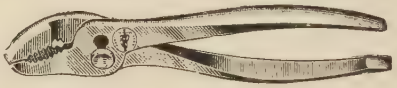


Polished head and handles temper blued.

Weight per dozen, 7½ pounds.

Price, No. **407-7**, Length, 7 Inches.. each **$2.50**

No. 408-8 Klein's Bent Nose Slip Joint Pliers



For use in difficult places. An excellent general purpose tool.

Has polished head and handles temper blued.

No. **408-8**, 8 Inch, Weight per Doz., 8 Lbs.....each **$3.00**

Nos. 5107 and 5112 Leather Plier Pockets

Made of good quality leather. Has slits through which belt is inserted. No. 5112 is the same as No. 5107 except that plier does not protrude.

Price, No. **5107**, Weight per Dozen, 2½ Pounds..each **$1.30**
" " **5112** " " " 2½ " .. " **1.40**

No. 5116 Klein's Detachable Plier Holsters

Made of heavy harness leather with loop to slip over belt.

Carries 7, 8 or 9-inch side cutting pliers.

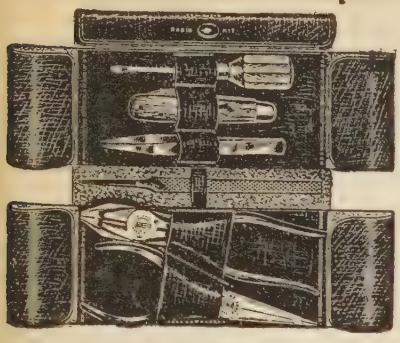
Mouth of pocket is framed to hold open position permanently.

Length, 10 inches.

Weight per dozen, 6 pounds.

Price, No. **5116**.....each **$3.00**

No. 1305-2 Klein's Inspectors' Tool Kits

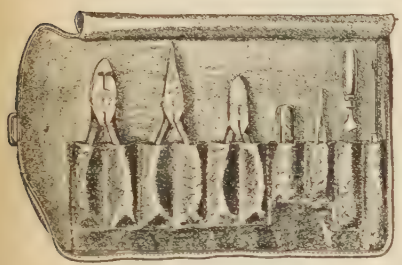


Solid black leather folding case strongly stitched, reinforced back. Fitted with one each of the following tools: No. 201–6 side-cutting plier; No. 301–5 long nose plier; No. 1550-2 Xela electricians' knife; 1 pair electricians' tweezers; 1 special file; 1 special screwdriver.

A handy assortment to fit the pocket.
Weight, 1½ pounds.

Price, No. **1305-2**.....each **$15.00**

Klein Tool-Kits



Designed for mechanics, service men and electricians.

Contains long nose plier, special side cutting plier, diagonal cutting plier, electrician's knife, a pair of electrician's tempered tweezers, 4½-inch file and a screw driver with insulated handle. All contained in a Keratol roll fastened with a strong strap and buckle.

No. **1305-33A**.....each **$15.30**

Klein's Rubber Glove Pouches

Scotch chrome leather pocket for carrying rubber gloves. Comes equipped with snap and Dee ring, ready to attach to body belt.

No.	5120–9	5120–15
Each	$4.00	$5.00
Size, In	7½x9	7½x15
Weight per Doz	4½	6½

No. 5111 Klein's Hip Pocket Tool Cases

This case is suitable for carrying pliers or other tools in hip pocket.

Prevents cutting of clothes, or possible injury to the person.

Made of black leather.

Weight per dozen, 2½ pounds.

Price, No. **5111**, Size, 5x7 Inches....each **$2.00**

Neatsfoot Oil

Keeps leather soft and pliable. Prolongs its life.

Supplied in cans with full directions for use.

Pint Can.....each **$.75**
Quart Can.....each **1.25**
Half Gallon Can.....each **2.25**

Xela Electrician's Scissors

Made of high grade steel properly tempered.

Has screw hinge.

Nickel plated finish.

Size, 5 in.

Weight per dozen, 2 pounds.

No. **2100-5**.....each **$1.70**

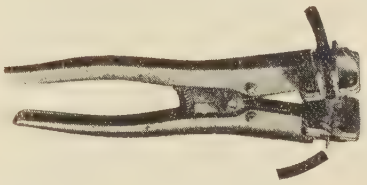
Electricians' Knives

A handy combination for the electrician, combining an emergency screwdriver, a knife blade for cutting or stripping wire; safely locked so that it cannot close during use. The commendable features are a well-tempered blade, a strong joint, a solid well-proportioned hand fitting handle and a lock to keep the blade safely open, yet promptly releasable when it is desired to close the blades.

Screwdriver blade is locked when open; to unlock, press down on large blade.

Price, No. **1550-2**, Double Blade.....each **$2.70**

Ideal E-Z Wire Strippers



Requires no cocking or setting.

Triplicate action of clamping wire, cutting insulation and stripping is automatically timed and performed with one squeeze of the handles. When pressure is released, handles open, resetting stripper for next snip. Cutting edges are shielded and blind centers of blades prevent cutting or scarring of the wire.

No.	For Stripping Solid or Stranded Wires	Each
1	Nos. 22, 20, 18, 16, 15, 14 and 12	**$5.00**
2	Nos. 18, 16, 15, 14, 12 and 10	**5.00**
3	Nos. 8 to 5 (Provided Insulation Does Not Exceed ⅜-Inch Diameter)	**5.00**

No. 1515-1 Klein's Cable Sheath Splitting Knives

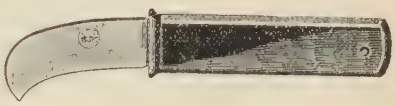
Extra heavy.

Knife edge is tempered and ground to a keen edge. Handle is made of leather.

Weight per dozen, 12 pounds.

Price. No. **1515-1**.....each **$5.50**

Klein's Skinning Knife for Linemen



Shape of blade has been carefully considered to make it a real safety tool.

Half hard rubber handle is molded on securely and provides adequate insulation and a positive grip.

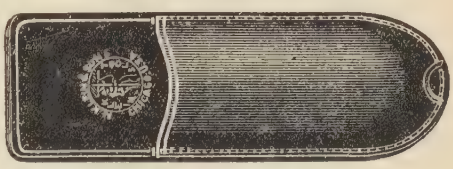
Hole in handle is through the solid rubber.

Blade, 3 inches long, 8 inches long overall.

Weight.....pounds 4¼
No. **1560-3**.....each **$3.00**

Skinning Knife Sheath

For No. 1560-3 Knife



Can be riveted to belt or carried in hip pocket. Opening at bottom to prevent collection of dirt and permit escape of water.

Weight per dozen, 2½ pounds. Size, 3x9 inches.

No. **5163**.....each **$1.60**

No. 3109-20 Klein's Combination Steel Lag Screw Wrenches

This wrench is forged from select bar steel. The slot is formed in a cross shape and will fit machine bolts, nuts or lag screws from ⅜ inch to ⅝ inch. The small end of the wrench is arranged for 5/16-inch machine bolts or lag screws. The round hole allows the end of a bolt to come through as the nut is run on.

The jaw is wider at its upper portion and when this wrench is put on a nut or bolt the tendency is to draw the bolthead or nut into the wrench and prevent slipping off. Weight, per dozen, 20 pounds.

Price, Nos. **3109-20**, Length, 13½ Inches ....each **$5.00**

Klein's Lineman's Wrenches

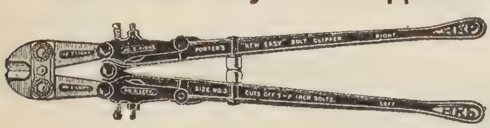
Bell System Type

This wrench is forged from selected bar steel and is of the open end type with 2 openings of different size at each end. A hole is also provided for turning in pole steps, etc.

Weight per dozen, 21 pounds.

Price, No. **3146**, for ⅝-Inch Hardware...........each **$5.00**
Price, No. **3146**-A, for ¾-Inch Hardware........each **5.00**

Porter New Easy Bolt Clippers

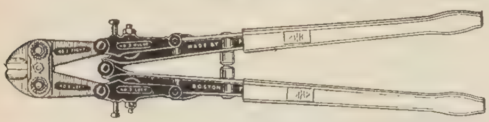


Has japanned malleable iron handles, rubber buffers, and tempered tool steel jaws. The jaws can be dressed when necessary with a mill file. Furnished with clipper cut or center cut jaws.

No.	0-NE	1-NE	2-NE	3-NE
Bolt Clipper ... each	**$4.00**	**$5.00**	**$7.00**	**$9.00**
Extra Jaws ... per pair	**2.00**	**2.45**	**3.50**	**4.45**
Approximate Length ... in.	18	24	30	36
For Annealed Bolts in Thread ... in.	5/16	⅜	½	⅝
For Soft Rods ... in.	¼	5/16	⅜	½
For Spring Wire with Special Temper Jaws Only ... in.	.203	.238	.284	.340
Approximate Weight ... lbs.	3¼	5¼	8½	12½

Porter Electric Wire Cutters

With Insulated Handles



Jaws open to accommodate wire and cable insulation; beveled mostly on one side. In using them on bolts or rods, cutting capacity is limited to opening at heel of jaws, not at point. The wider opening does not give them greater power capacity. Will not cut hardened material.

No.	Each	Extra Jaws per Pair	Length Tool Inches	Average Opening Jaws Inches	To Cut, Inches: Annealed Bolts in Thread	To Cut, Inches: Soft Rods	Net Weight Pounds
0-WC	**$6.50**	**$2.00**	18	½	5/16	¼	3½
1-WC	**8.25**	**2.75**	24	¾	⅜	5/16	5½
2-WC	**11.00**	**3.30**	30	1⅛	½	⅜	9
3-WC	**14.00**	**5.00**	36	1¼	⅝	½	13¼

Klein's Linemen's Pole Climbers

Also Called Spurs or Hooks

Safety is the first and vital point in considering linemen's pole climbers. The lineman going up a pole depends entirely upon his spurs.

To assure utmost dependability Klein Climbers are forged from special steels and are individually tempered. Shanks and gaffs are tested to insure perfect riveting and temper.

Klein's Eastern Climbers

When ordering specify length of shank desired. Measure from instep to extreme end. Other than stock sizes to order. Tested before leaving factory.

No. 1901

Stock sizes, 15, 15½, 16, 16½, 17, 17½ and 18 inches.
Has punched strap loops. Packed 1 pair in a carton.
No. **1901**, Wt. 3⅝ Lbs......................per pair **$8.20**

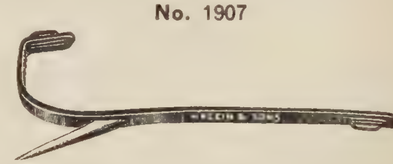
No. 1900

Same and same sizes as No. 1901 but has riveted strap loops. Packed 1 pair in a carton.
No. **1900**, Wt. 3⅝ Lbs......................per pair **$8.20**

No. 1903

Light weight pattern with riveted strap loops. Packed 1 pair in a carton.
No. **1903**, Wt. 2⅞ Lbs......................per pair **$8.20**

No. 1907



This is the standard tree climber used by forest rangers, top loggers, fire wardens, surveyors, etc. Made in all standard sizes.

Has punched strap loop. Gaffs, or spurs, are 5½ inches long measured on the outside and 3 inches long measured on the underside. They are set high in the leg iron so that points clear the ground.

Packed 1 pair in a carton.
No. **1907**..........................per pair **$9.00**

Klein's Climber Straps and Pads

Set consists of 2 calf straps 1¼x22 in. with 4x4 in. pads and 2 ankle straps 1¼x22 in. Leather is first quality harness leather. Buckles drop forged, fitted with roller.

Cat. No.	Per Set	Description	Wt. Lbs. per Doz. Sets
5301-1	**$6.90**	Plain Pads	15
5301-2	**7.40**	Sheep-lined Pads	16
5301-3	**7.40**	Felt-lined Pads	16
		Straps, Only	Doz. Pr.
5301-4	**$2.90**	Plain Straps, 2 Straps	6
5301-5	**4.10**	Plain Straps, Plain Pads, 2 Each	9

Extra length straps can be made to order at slightly higher prices.

		Pads, Only	Doz. Pr.
8200	**$1.70**	Sheep-lined, 4x4 In.	3
8201	**1.70**	Felt-lined, 4x4 In.	3
8202	**1.30**	Plain Leather, 4x4 In.	3

Pads made of select leather, arranged with loops through which to slip climber strap.

Klein's Climber Straps and Pads

Bell System Type

Set consists of 2 calf straps 1x22 in. with 2 special pads and 2 ankle straps 1x26 in.

Cat. No.	Per Set	Description	Wt. Lbs. per Doz. Sets
5301–6	$7.90	With Plain Pads.................	14
5301–7	8.30	With Sheep-lined Pads...........	15
5301–8	8.30	With Felt-lined Pads.............	15
		Straps, Only	Doz. Pr.
5301–9	$2.80	Calf Straps, 1x22 in., 2 Straps.....	5
5301–10	3.10	Ankle Straps, 1x26 In., 2 Straps...	6
		Pads, Only	Doz. Pr.
8203	$1.90	Plain Leather....................	4
8204	2.30	Sheep-lined Leather..............	5
8205	2.30	Felt-lined Leather...............	5

Pads made of select leather, arranged with loops for climber straps and climber. Tapering 3¼ inch to 2¾x6¼ inch deep.

No. 5108 Klein's Inspectors' Harness Leather Tool Bags

This bag is made of harness leather and will stand rough usage. It has a shoulder strap combined with a pad and hand strap; also a saw and bit holder. The bottom is three ply and is studded with steel studs. Retaining straps pass clear around the bag.

Seams are sewed with hot waxed linen thread, lockstitched.

Cat. No.	Size In.	Wt. Lbs.	Price Each
5108-18	18x8	4½	$17.00
5108-20	20x8	5⅛	17.50

Linemen's Canvas Tool Bags, Leather Bottoms

Made of one piece white duck reinforced all around bottom with heavy bag leather, 3¼ inches up on 5102 series, 8 inches up on 5105 series.

Bottom is made of heavy leather outside and duck inside, lock stitched all around. Bottom is protected with strong steel studs.

Bottoms and sides joined together with lock stitched leather welt seams.

Mouth of bag is formed by a 12-gauge steel frame.

Canvas is clinched between this frame and an inside secondary steel frame.

Has harness leather handles and two retaining straps with buckles.

No. 5102

No.	Each	Size, In.	Wt. Lbs. Each
5102–18	$10.50	18	3¾
5102–20	11.50	20	3⅞

Other sizes on order.

No. 5105

No.	Each	Size In.	Wt.Lbs. Each
5105–18	$11.00	18	4½
5105–20	12.00	20	4¾

Klein's Tool Belts

All Klein Belts are made of first quality vegetable tanned harness leather. Sewing is with genuine linen thread, hot waxed, lock stitched. Rivets are solid copper, hand set with burrs. Buckles, including tongues, and Dee Rings are steel drop forgings tested to 1500 lbs.

Catalog numbers prefixed by the letter "H" indicate belts fitted with Hank's Dee Rings which must be used with Hank's Safety Straps. All other makes are fitted with Standard Double Bar Dees.

To insure proper fit select size that allows heel of Dee Rings to come about 1 inch in front of hip bones as per following table.

Distance Between Dee Rings, In.....	20	22	23	24	26	28	30
Belt Size, In........................	36	38	40	42	44	46	48

No. 5204 DE

Klein's Tool Belts

No.	Each	Width In.	Wt. per Doz.
With Standard Dees			
5204	$10.20	3½	32
5205	11.20	*2¼	33
5202	9.50	2¼	30
With Hank's Dees			
H5204	$10.20	3½	32
H5205	11.20	*2¼	33
H5202	9.50	2¼	30
With Plier Pocket, Knife Snap and Tape Thong Attached — With Standard Dees			
5204DE	$13.00	3½	37
With Hank's Dees			
H5204DE	$13.00	3½	37

*Double thickness.

No. 5204 Klein's Texas Belts

No. H5204 TSO (With Hank's Dees)

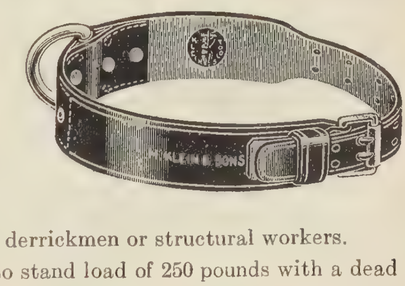
Are lined throughout with soft latigo leather.

Made 4 inches wide at center of back for full support, tapering to 2¼ inches wide at hips to permit free bend to body of wearer.

No. **5204-TSO**, Standard Dees, Weight, 33 Lbs. each **$15.60**

No. H5204-TSO, Hank's Dees, Weight, 33 Lbs..each **15.60**

No. 5212 Klein's Derrick Belts



For oil derrickmen or structural workers.

Made to stand load of 250 pounds with a dead fall of five feet.

One three inch Forged Dee Ring at back for life line.

Double tongue buckle.

No. **5212**, Weight, 42 Lbs......................each **$11.00**

Klein Safety Straps

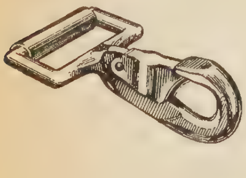
Klein Safety Straps are made in various patterns in a choice of two materials.

First quality back stock vegetable tanned harness leather.

The new Klein-Kord fabric especially made for this purpose.

In all cases sewing is with genuine linen thread, hot waxed and lock stitched. Riveted by hand with solid copper rivets.

All buckles, including tongues, are drop forged, tested to 1500 pounds. There are three patterns of drop forged, tested snaps available as illustrated below.



Standard Snaps

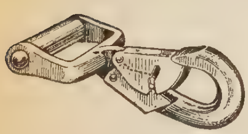
Have wide nose covering spring latch protecting it from accidentally twisting out of Dee Ring, and can be used with any Dee.

Straps listed with plain catalog numbers have Standard Snaps.

Hank's Snaps

Are of special construction and must be used in conjunction with Hank's Dee Rings on belt.

Straps listed with "H" prefixing catalog numbers have Hank's Snaps.

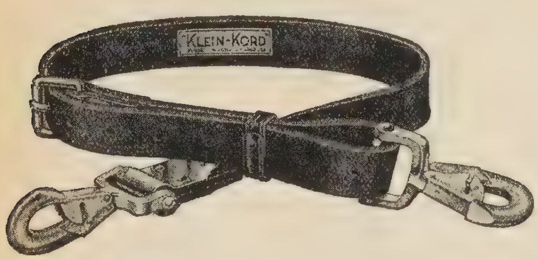


Klein-Lok Snaps

Have a twin latch arrangement. Both latches must be pressed simultaneously to release. Full factor of safety. Can be used with any Dee.

Straps listed with "KL" prefixing catalog numbers have Klein-Lok Snaps.

Klein-Kord Fabric Safety Straps



No.	Each	Size	Wt. Lbs. per Doz.
5233	$8.00	1¾ in. x 5 ft. 8 in.	30
H5233	8.00	1¾ in. x 5 ft. 8 in.	30
KL5233	9.00	1¾ in. x 5 ft. 8 in.	30

Klein's Texas Safety Straps

Made of finest steer hide harness leather with minimum metal parts. Extra pad at buckle protects main strap from wear at this important point. Free end of wear pad is provided with heavy box loop through which the single thickness end of strap passes, permitting free adjustment of safety to length desired.

No.	Each	Size, In.	Description	Wt. Lbs. per Doz.
H5251T	$9.70	1¾ in. x 5 ft. 8 in.	Hank's Snaps	30
5251T	9.70	1¾ in. x 5 ft. 8 in.	Standard Snaps	30
H5253T	12.40	2 in. x 5 ft. 8 in.	Hank's Snaps	39
5253T	12.40	2 in. x 5 ft. 8 in.	Standard Snaps	39

Klein Leather Safety Straps

No. 5251

No.	Each	Size	Wt. Lbs. per Doz.
Leather Wear Pads			
5251	$9.70	1¾ in. x 5 ft. 8 in.	30
H5251	9.70	1¾ in. x 5 ft. 8 in.	30
KL5251	10.70	1¾ in. x 5 ft. 8 in.	30
Copper Wear Pieces			
5250	$9.70	1¾ in. x 5 ft. 8 in.	30
H5250	9.70	1¾ in. x 5 ft. 8 in.	30
KL5250	10.70	1¾ in. x 5 ft. 8 in.	30
5253	12.40	2 in. x 5 ft. 8 in.	39
H5253	12.40	2 in. x 5 ft. 8 in.	39
KL5253	13.40	2 in. x 5 ft. 8 in.	39
Bell System Type			
5257S	$13.00	2 in. x 5 ft. 1½ in.	38
5257L	13.70	2 in. x 5 ft. 10 in.	40
N. E. L. A. Specifications			
5258	$13.40	2 in. x 5 ft. 6 in.	39

Any of above furnished with 15 inch Long Wear Pad to order at no extra cost.

No. 5215 Klein's Extension Straps

This strap is 1¾ inches wide, made of first quality harness leather and fitted with special forged D ring and buckle. It is worn attached to D ring on main body belt and used when large diameter poles necessitate a longer safety strap than the regular. By engaging snap of the regulation safety strap to the special D ring on the extension strap the lineman can immediately adapt his outfit so that he has no difficulty in working conveniently. No matter how large the pole—can be lengthened or shortened.

Size, 1¾x15 inches.

Weight per dozen, 14 pounds.

Price, No. **5215**..................................each **$4.00**

No. 5209 Klein's Safety Harnesses

Back

Front

Meets requirements of various safety commissions for use where danger from gassing is present. Working in gassy manholes, gas tanks, oil tanks and even boilers, men are frequently overcome and an emergency arises instantly. This harness provides a sure means by which patient can be brought to safety and danger overcome. Design is such that it slings wearer in a perpendicular position so that he can be readily hauled through an ordinary manhole opening. A solid harness leather back plate 2¼x10 inches is stitched and riveted around the 1¼-inch adjustable belt strap. Back plate also carries a tested drop forged D ring to which the ¾-inch manila life line, 25 feet in length is permanently attached. Shoulder straps are ¾ inch and made adjustable and riveted to belt at single ends. These straps hold belt in position around chest so as not to encumber wearer while working. Weight per dozen, 30 pounds.

Price, No. **5209**, with Life Line..............each **$13.40**

No. 13 Graybar Lineman's Double Faced Hammers

Bell System Type

Drop forged oil tempered head with special short neck designed to strike a heavy accurate blow in a confined space.

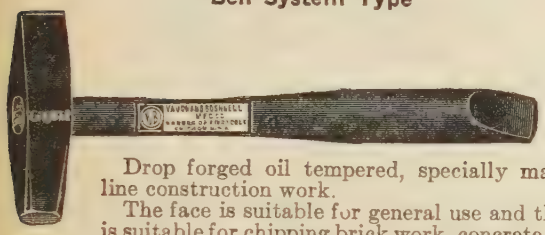
Length over all, 15 inches.

Weight of head, 2¼ pounds. Weight of hammer complete, per dozen, 35 pounds.

Price, No. **13** ..... each **$5.80**

No. 4638 Graybar Lineman's Chipping Hammers

Bell System Type



Drop forged oil tempered, specially made for line construction work.

The face is suitable for general use and the pein is suitable for chipping brick work, concrete, stone, etc., or for riveting.

Length over all, 16 inches.

Weight of head, 3½ pounds. Weight of hammer complete, per dozen, 48 pounds.

Price, No. **4638** ..... each **$4.50**

No. 1 Diamond Toggle Bolts

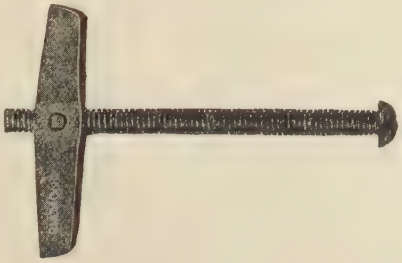
The No. 1 Diamond Toggle Bolt has the threaded bolt riveted to the toggle head.

Size Inches	Price per 100	Size Inches	Price per 100	Size Inches	Price per 100	Size Inches	Price per 100
1/8 x3	$9.00	3/16x6	$12.50	5/16x3	$17.50	3/8x6	$31.00
1/8 x4	10.00	1/4 x3	10.50	5/16x4	18.00	1/2x3	30.00
3/16x3	9.50	1/4 x4	11.75	5/16x6	20.00	1/2x4	32.00
3/16x4	10.50	1/4 x5	13.00	3/8 x3	20.00	1/2x6	36.00
3/16x5	12.00	1/4 x6	14.00	3/8 x4	24.00	....	.....

No. 5 Diamond Toggle Bolts

A swivel nut is provided in the toggle head which permits a stove bolt being screwed in with a finished head at the outside of the work.

It is furnished with either round or flat slotted head.



Size Inches	Price per 100	Size Inches	Price per 100	Size Inches	Price per 100	Size Inches	Price per 100
1/8x3	$9.00	3/16x5	$12.00	1/4x5	$13.00	5/16x6	$20.00
1/8x4	10.00	3/16x6	12.50	1/4x6	14.00	3/8x3	20.00
3/16x3	9.50	1/4x3	10.50	5/16x3	17.50	3/8x4	24.00
3/16x4	10.50	1/4x4	11.75	5/16x4	18.00	3/8x6	31.00

Diamond Malleable Iron Expansion Shields

Long Standard

Diam. Screw Inches	Per 100	Length Inches	Outside Diam. Inches	Diam. Screw Inches	Per 100	Length Inches	Outside Diam. Inches
1/4	$15.00	1 1/2	1/2	5/8	$45.00	3 1/2	7/8
5/16	18.00	1 3/4	9/16	3/4	65.00	3 1/2	1 1/8
3/8	25.00	2 3/4	5/8	7/8	95.00	5	1 3/8
7/16	32.00	2 3/4	11/16	1	110.00	5	1 1/2
1/2	38.00	3 1/2	3/4	1 1/4	250.00	6 1/2	1 7/8

Short Standard

3/16	$15.00	1	3/8	7/16	$32.00	2	11/16
1/4	15.00	1	7/16	1/2	38.00	2	3/4
5/16	18.00	1	1/2	5/8	45.00	2	7/8
3/8	25.00	2	5/8	3/4	65.00	2	1 1/8

Prices do not include lag screw.

Keystone Interlocking Expansion Shields

Double

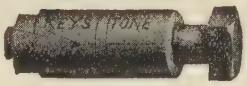
Prevents the nut being drawn out of the shield when heavy loads are applied. Guides the mechanic in determining when to stop tightening up the bolt. Prevents the nut being drawn past the point of maximum expansion. Locks the two sides and the nut into a unit of resistance against the load.

Made of malleable iron for durability and strength.

Diam. Screw or Bolt Inches	Shields Only per 100	Length Shield Inches	O. D. and Size Drill to Use Inches	Diam. Screw or Bolt Inches	Shields Only per 100	Length Shield Inches	O. D. and Size Drill to Use Inches
1/4	$15.00	1 1/2	1/2	3/4	$65.00	3 1/4	1 1/8
5/16	18.00	1 3/4	9/16	7/8	95.00	4	1 1/2
3/8	25.00	2	11/16	1	110.00	4 1/4	1 5/8
7/16	32.00	2 1/2	7/8	1 1/4	250.00	6	2 1/8
1/2	38.00	2 1/2	7/8	1 1/2	350.00	7 1/2	2 1/2
5/8	45.00	2 7/8	1	...	.....	...	...

Keystone Single Expansion Shields

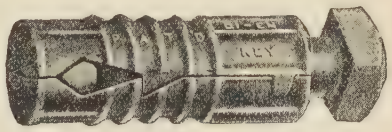
For Machine Bolts and Machine Screws



Diam. of Screw or Bolt Inches	Length Inches	Outside Diam. and Size Drill to Use, Inches	Price per 100
1/4	1 5/16	1/2	$15.00
5/16	1 1/2	9/16	18.00
3/8	1 5/8	11/16	25.00
1/2	1 7/8	7/8	38.00
5/8	2	1	45.00
3/4	2 3/4	1 3/16	65.00
7/8	2 1/2	1 1/2	95.00
1	2 3/4	1 5/8	110.00

Di-En-Key Expansion Bolts

With Malleable Iron Expansion Shields



For use in suspension rods for mine hangers, steam and water pipes, sprinkler systems and allied lines. The smaller sizes are adapted to opera chairs and school furniture work.

Prices do not include machine bolt.

Diam. Screw Inches	Length Inches	Outside Diam. Inches	Price per 100	Diam. Screw Inches	Length Inches	Outside Diam. Inches	Price per 100
1/4	1	7/16	$15.00	1/2	2 1/2	7/8	$38.00
5/16	1 3/4	9/16	18.00	5/8	2 1/2	1	45.00
3/8	2	11/16	25.00	3/4	3 3/4	1 1/4	65.00

Diamond Multi-Size Screw Anchors

Diamond Multi-Size Screw Anchors are designed to accommodate in one anchor several diameters of wood screws. The purpose is to reduce the number of anchors required to accommodate all sizes of screws. They are made in several lengths covering the majority of uses. For instance, the No. 10 to 14x1-inch anchor will work successfully with all sizes of wood screws ranging from No. 10 to No. 14 inclusive.

The high projecting interior ribs support and centrally locate a small No. 10 wood screw causing the shield to expand and giving ample holding capacity for that size of screw.

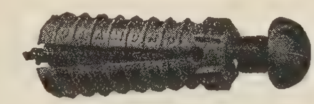
In this same size of anchor larger screws up to and including No. 14 may be used equally well. This is accomplished by the flexible interior ribbing.

Where the larger screw is used, the ribs are pressed down and the valleys at the exterior are forced outward to permit the greater diameter of the screw to enter the shield. The improved Multi-Size Screw Anchor has two advantages over the original Multi-Size; the screw enters the shield more easily without danger of marring the head of the screw and relieves the strain applied to the screw when inserted. It will also sustain a greater load.

Packed 100 to a box.

Designating Sizes	Per 100	For Wood Screws No.	Lgth. In.	Drill Size Inches	Weight per 100
Nos. 6 to 8x ¾″	$5.00	6 to 8	¾	¼	1
Nos. 6 to 8x1½″	5.60	6 to 8	1½	¼	1¾
Nos. 10 to 14x ¾″	5.60	10 to 14	¾	5/16	1½
Nos. 10 to 14x1 ″	5.60	10 to 14	1	5/16	2
Nos. 10 to 14x1½″	8.00	10 to 14	1½	5/16	2¾
Nos. 16 to 18x1 ″	6.25	16 to 18	1	⅜	3
Nos. 16 to 18x1½″	9.00	16 to 18	1½	⅜	4¼
Nos. 20 to 24x1¾″	10.00	20 to 24	1¾	7/16	5¼

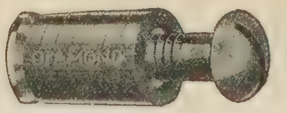
Diamond 1-Part Composition Shields



Dimensions, Inches: Inside Diameter Shield	Length of Shield	Outside Diameter	Size Screws	Price per 100
⅛	½	¼	5-6-7	$4.40
⅛	⅝	¼	5-6-7	4.40
⅛	¾	¼	5-6-7	4.40
⅛	1	¼	5-6-7	4.40
3/16	½	5/16	8-9-10-11	5.00
3/16	¾	5/16	8-9-10-11	5.00
3/16	1 Light	5/16	8-9-10-11	5.00
3/16	1 Heavy	⅜	8-9-10-11	5.00
3/16	1⅝	5/16	8-9-10-11	6.25
¼	¾	7/16	12-13-14	5.60
¼	1	7/16	12-13-14	5.60
¼	1½	7/16	12-13-14	8.00
¼	2	7/16	12-13-14	10.00
¼	2½	7/16	12-13-14	12.00
5/16	¾	7/16	15-16-17-18	6.25
5/16	1	7/16	15-16-17-18	6.25
5/16	1⅜	½	15-16-17-18	10.00
5/16	1½	7/16	15-16-17-18	10.00
5/16	2	7/16	15-16-17-18	13.00
⅜	1¼	9/16	20-22-24	15.00
⅜	2	9/16	20-22-24	15.00
½	2	¾	26-28-30	25.00
⅝	2	⅞	⅝-In. Lag	30.00
⅝	3½	⅞	⅝-In. Lag	50.00

Put up in wooden boxes, 100 to a box.

Diamond Calking Anchors



Diameter Bolt or Screw, In.	Per 100	Size Hole, Inches: Diameter	Depth	Suggested Safe Load Pounds	Std. Pkg.	Weight Pounds per 100
No. 6-32	$3.80	¼	⅜	80	100	1
No. 8-32	4.50	5/16	½	90	100	1½
No. 10-24	4.95	⅜	⅝	175	100	2
No. 12-24	6.50	7/16	¾	320	50	3½
¼-20	7.20	½	⅞	400	50	4½
5/16	9.75	⅝	1	480	50	11
⅜	12.00	¾	1¼	720	50	16
7/16	15.00	⅞	1½	950	50	24
½	15.00	⅞	1½	1000	50	24
⅝	25.00	1⅛	2	1250	50	41

Style B Diamond Super-Grip Expansion Shields

Shield expanded by long, tapered cone shaped end of bolt. Nut grips work and expands shield. Bolts galvanized by the hot drip process. One calking tool furnished free with each box of bolts. Prices include bolts.

Size In.	O.D. In.	Length, Inches: 1½ Per 100	2 Per 100	2½ Per 100	3 Per 100	3½ Per 100	4 Per 100	5 Per 100	6 Per 100
¼	7/16	$15.50	$15.65	$15.80	$15.95	......	......	......	......
5/16	½	23.00	23.50	24.00	24.50	......	......	......	......
⅜	9/16	......	......	29.25	30.00	$30.75	$31.50	$33.00	$34.50
½	¾	......	......	......	44.40	45.65	47.00	48.20	49.40
⅝	⅞	......	......	......	76.40	78.25	80.00	83.80	87.60
¾	1	......	......	......	......	111.90	114.60	120.00	125.40

Peirce Expansion Bolts

No.	Size Inches	Standard Package	Wt., Lbs. per 100	Price per 100
1	¼x1¾	100	7.1	$6.00
2	¼x2	100	7.5	6.20
3	¼x2½	100	8.3	6.50
4	¼x3¼	100	9.5	7.80
4A	¼x4	100	10.7	8.70
4B	¼x5	100	12.3	10.90
5	⅜x2½	100	14.9	10.80
6	⅜x3	100	15.9	11.50
7	⅜x3½	100	16.9	12.30
8	⅜x4½	100	18.9	14.40
9	⅜x5	100	19.9	14.70
10	⅜x5½	100	21.0	15.60
11	½x2½	50	41.2	17.30
12	½x3½	50	47.2	18.90
13	½x4	50	50.2	19.80
14	½x4½	50	53.0	20.50
15	½x5	50	56.0	21.50
16	½x5½	50	59.0	22.40
17	½x6½	50	62.0	24.00
18	½x8	50	73.0	26.90

Extra Lead Sleeves

No.	Diameter Inches	Standard Package	Wt., Lbs. per 100	Price per 100
22	¼	100	2.75	$2.10
23	⅜	100	5.9	3.30
24	½	100	21.5	10.00

Diamond Tenax Expansion Shields

For Machine Bolts

Tenax is cast in one piece of malleable iron. It has breakage connections between the nut and expansion shell. When the bolt is tightened the connections between the nut and shell break down and the nut telescopes into the shell and is guided by the slides in perfect alignment into the shell. A 4 way expansion with 4 ways to use. Smallest diameter of hole of any Malleable Iron expansion of equal bolt diameter. Has extremely high holding capacity. Prices do not include bolts.

Diam. Bolt In.	Per 100	Diameter Shield and Size Drill Inches	Length In.	No. Per Box	Shipping Wt. Lbs. per 100
1/4	$15.00	7/16	1 1/4	100	3
5/16	18.00	1/2	1 1/2	100	5
3/8	25.00	5/8	2	100	8
1/2	38.00	3/4	2 1/2	100	12
5/8	45.00	7/8	2 7/8	100	17
3/4	65.00	1	3 1/4	50	24

Diamond D H D Hammer Drive Anchors

For nailing to concrete, brick or stone. Made of aluminum alloy, with steel nails, hot galvanized. Holds greater load when fastened to stone than wood screw screwed into wood.

Diam. and Lgth. of Shield In.	Diam. Drill to Use In.	Std. Pkg.	Wt. Lbs. per 100	Per 100	Diam. and Lgth. of Shield In.	Diam. Drill to Use In.	Std. Pkg.	Wt. Lbs. per 100	Per 100
3/16x 7/8	3/16	100	1 1/4	$8.00	5/16x2 1/4	5/16	100	6	$18.00
3/16x1 1/4	3/16	100	1 1/2	9.00	5/16x2 3/4	5/16	100	7 1/2	20.00
1/4 x1	1/4	100	2 1/4	10.00	3/8 x2	3/8	100	8	20.00
1/4 x1 1/4	1/4	100	2 3/4	11.00	3/8 x3 1/4	3/8	100	14	25.00
1/4 x1 1/2	1/4	100	3 1/2	12.00	1/2 x2 1/4	1/2	50	17	30.00
5/16x1 1/4	5/16	100	3 1/2	14.00	1/2 x3 1/2	1/2	50	25	35.00
5/16x1 3/4	5/16	100	5	16.00	.....	..	...	....	.....

Diamond N Drill Holders and Points

Drill Holders

Drill holder and loose points is a combination which is convenient for electricians and in other lines of industry where numerous small holes must be drilled for fastening up small fixtures.

Holder will take drill points from 1/4 to 1 inch.

Weight, 8 1/2 pounds.

Per Dozen..... $24.00

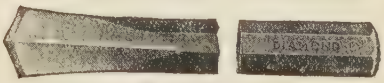
Drill Points

The drills are carefully tempered to insure sufficient hardness at the point to withstand the wear of cutting and the temper is drawn away toward the shank so as to produce a softer steel where it enters the handle to prevent breaking off at that point.

Size In.	Each	Lgth. In.	Wt., Lbs.	Size In.	Each	Lgth. In.	Wt., Lbs.
1/4	$8.50	4 1/2	1 1/4	5/8	$12.00	6 1/4	2 7/8
5/16	8.50	4	1 1/8	3/4	14.00	6	4 1/4
3/8	8.50	4 1/2	1 1/4	7/8	16.00	6 1/2	4 3/4
7/16	9.00	4	1 1/2	1	18.00	6 1/2	6
1/2	10.00	5	2	...	.....	...	...

Diamond N Drills

4-Point or Star Drill



Diamond or Single Point Drill

Made of high grade octagon drill rod. Quality of steel is tested for uniformity. Heat treatment is scientifically conducted; heats for hardening and drawing the temper are determined by pyrometer and thermometer.

Diam. Drill In.	8 and 12-Inch Lengths: Wt. Lbs. per Doz.	8-In. Lgth. per Doz.	12-In. Lgth. per Doz.	18-In. Lgth.: Wt. Lbs. per Doz.	18-In. Lgth. per Doz.	24-In. Lgth.: Wt. Lbs. per Doz.	24-In. Lgth. per Doz.
1/4	2	$8.25	$8.50	3	$11.00	4	$13.50
5/16	3	8.25	8.50	4 1/2	11.00	6	13.50
3/8	4	8.25	8.50	6	11.00	8	13.50
7/16	5	8.70	9.00	7 1/2	11.50	10	14.00
1/2	5	9.65	10.00	7 1/2	12.50	10	15.00
9/16 & 5/8	9	11.65	12.00	13 1/2	15.00	18	17.50
11/16 & 3/4	12	13.70	14.00	18	17.50	24	20.00
7/8	15	15.30	16.00	22 1/2	20.00	30	22.50
1	21	17.00	18.00	31 1/2	22.50	42	25.00
1 1/8	27	23.00	24.00	41	28.00	54	32.00
1 1/4	27	.....	30.00	41	35.00	54	40.00
1 3/8	35	.....	40.00	53	45.00	70	50.00
1 1/2	42	.....	50.00	63	56.00	84	62.00
1 5/8	42	.....	60.00	63	66.00	84	72.00
1 3/4	43	.....	75.00	65	81.00	86	87.00
1 7/8	53	.....	90.00	80	97.00	106	104.00
2	54	.....	105.00	81	112.00	108	120.00
2 1/4	55	.....	135.00	83	145.00	110	165.00
2 1/2	79	.....	165.00	119	175.00	158	195.00

Diamond Di-Forge Twist Drills and Drill Holders

Style B Holder

Style C Holder

The drill is forged from a solid bar of vanadium tool steel. This process produces a tougher and more durable drill than can be had by the machine process. It is intended to be used with a hand or electric hammer and not as a rotating drill.

Drill holders are made of vanadium steel. Type C drill holder is made with a soft rubber grip with flange to protect the hand of the operator.

Diameter of Drill Inches	Length Over All Inches	Depth of Hole Inches	Weight Pounds per Dozen	Price per Dozen
3/16	2 5/8	1 1/4	1/2	$10.80
1/4	3 1/8	1 1/2	3/4	10.80
5/16	3 7/8	2	7/8	12.80
3/8	5 1/8	3 1/4	1 1/4	14.80
7/16	5 1/4	3 3/8	1 1/2	18.80
1/2	5 1/2	3 1/2	2	22.80
9/16	5 1/2	3 1/2	2 1/4	26.80

Twist drills are put up in sets containing 1 holder and 1 each 3/16, 1/4, 5/16, 3/8, 7/16 and 1/2-inch drill points.

Price, Drill Set, with Type B Holder.....per set $7.00
Price, Drill Set, with Type C Holder.....per set 8.00
Price, Style B Drill Holders.....per dozen 24.00
Price, Style C Drill Holders.....per dozen 48.00

Nos. 50 and 53 Peirce Hammer Drills

The Peirce Hammer Drill is a double-ended tool designed for drilling holes easily in brick, stone and concrete. It drills the hole and swages the lead sleeve of the bolt. Holds all sizes of drill points.

The drill cannot become wedged in the hole while drilling as a backward stroke of the hammer instantly releases it.

Injury to the hands of the operator is impossible.

The chuck has a quick release whereby a drill-point may be instantly removed and a sharp one inserted.

Price, No. **50** for Tamping ¼-Inch Bolts......each **$11.12**
Price, No. **53** for Tamping ⅜-Inch Bolts......each **11.84**

Peirce Drill Points

Made of fine tool steel and machined to exact size.

The length of drill point depends on the length of bolt used. Two inches of the drill point are held inside the chuck. All drill points are measured overall. Special drill points of any diameter up to 1 inch, and any length, can be furnished to fit the hammer drill chuck. For ¼-inch expansion bolt use ½-inch drill; for ⅜-inch bolt, ⅝-inch drill; for ½-inch bolt, ⅞-inch drill.

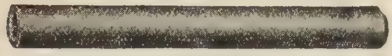
Cat. No.	Size Inches	Wt., Lbs. per 100	Price per 100	Cat. No.	Size Inches	Wt., Lbs. per 100	Price per 100
56	⅜x 4	20	$66.90	61	⅝x12	79	$247.10
57	½x 4	23	66.90	62	¾x 6	47	172.80
58	½x 6	33	76.20	63	¾x14	107	345.80
59	½x12	65	165.00	64	⅞x 6	57	227.70
60	⅝x 6	38	123.50	65	⅞x12	137	455.40

Peirce Hand Chucks

Permits the use of Peirce Drill Points with the old method of hand-and-hammer drilling.

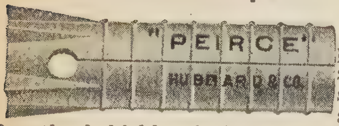
Cat. No.	Description	Std. Pkg.	Wt., Lbs. Each	Price per 100
55	For All Sizes of Drills	5	2.60	$150.00

Peirce Tamping Tools



Cat. No.	Diameter of Bolt, Inches	Std. Pkg.	Wt., Lbs. Each	Price per 100
67	¼	5	3.4	$43.70
68	⅜	5	4.9	43.70
69	½	5	10.2	43.70

Peirce Expansion Shields



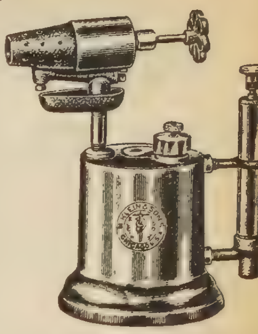
For attaching multi-point brackets to brick or stone buildings. Size of screw, Nos. 20 and 22; diameter of shield, ½ inch; length of shield, 2 inches. Standard package, 100. Weight per 100 pieces, 9.5 pounds.

Price, No. **31**...............................per 100 **$9.90**

No. 3428 Klein's Torches

1-Quart Capacity

For Gasoline



U.S. PAT. NO 1.676.352

Double length generating channels which quickly vaporize the fuel are a patented feature. Produces an intensely hot flame which can be regulated from minimum to full blast. Will not back generate. Cleaning plugs at all angles. Needle has positive shoulder stop preventing damage to burner by enlarging orifice.

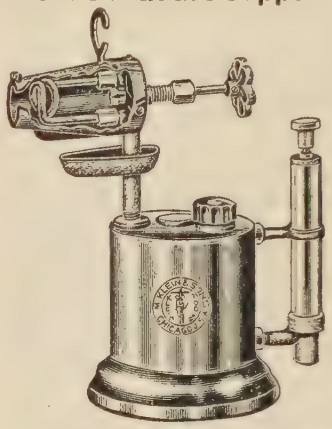
Pump is well made and sturdy.

Tank is heavy gauge copper, capacity, 1 quart.

Weight, 4½ pounds.

Price, No. **3428**.....each **$25.30**

Klein's 1-Quart Copper Tank Gasoline Torch



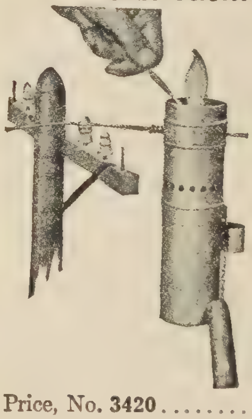
Has a generator coil. Intense heat around this coil completely vaporizes the fuel so that it burns as a dry gas, giving a hot, but easily controlled flame. Generator coil can be replaced in a few minutes at small expense by backing off two nuts. Burner tip is replaceable.

No. **3428C**..each **$25.30**

If torch head assembly to attach to present tank is wanted, order No. 808C.

No. **808C**...each **$8.00**

No. 3420 Klein's Staysalite Linemen's Torches



This torch burns alcohol without odor or noise and stays lit in a wind.

Light and small and is lit or extinguished in a moment, as wanted. Has no adjusting parts.

The Staysalite is carried in the lineman's belt and eliminates the ground man; can be hung directly on the wire under joint to be soldered.

Provided with a cup for holding soldering paste. Can be used as a small heater or for soldering iron.

Weight, 1¼ pounds.

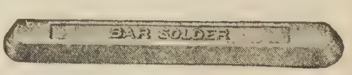
Price, No. **3420**...............................each **$10.00**

Soldering Coppers

Furnished without handle but having an iron rod fastened to the head, ready to be driven into a wooden handle.

Supplied in all sizes. Prices upon application.

Bar Solder



An alloy of tin and lead, made up in the form of bars for convenience in handling, for making soldered joints in metals, such as lead piping systems, for cable splices and other heavy work.

Price, Solder in Regular Bars..............per pound **$1.00**

Hope Linen Finished Tape

.007 Thick

Width Inches	Catalogue Numbers: Extra	Standard	Special	Light Weight
3/8	.....	19154	.....	.....
1/2	23814	13869	27029	11822
...	.....	.....	.....	.....
5/8	23815	19002	.....	11821
3/4	23816	13870	26661	11820
7/8	.....	15845	.....	.....
1	23817	13871	26662	14002
1 1/4	.....	14769	.....	.....
1 1/2	.....	13872	26663	14003
2	.....	17974	.....	.....

Linen Finished Tape

Width Inches	Catalogue Numbers: Standard .005 Thick	Special .005 Thick
1/4	25001	.....
3/8	8769	.....
7/16	.....	.....
1/2	25278	.....
5/8	25002	.....
3/4	25003	25284
7/8	25004	.....
1	8844	16061
1 1/4	25005	.....

Hope Silk Tape

Width Inches	Catalogue Numbers Unbleached .0045 Thick
1/4	24931
3/8	24932
7/16	24933
1/2	24934
5/8	24935
3/4	24936
7/8	.....
1	.....
1 1/4	.....

Hope Webbing

Width Inches	Catalogue Numbers: Herringbone	Medium Twill	Fine	Extra Heavy	Heavy
1/4	22386	25006	21787	.....	.....
1/2	22390	25007	21790	.....	.....
5/8	22392	.....	21792	.....	18376
3/4	22394	13100	21794	19451	18375
7/8	22396	.....	21796	.....	.....
1	22398	16628	21798	7251	8730
1 1/4	.....	.....	.....	11838	9982
1 1/2	.....	19184	.....	1258	1613
1 5/8	.....	.....	.....	.....	9980
1 3/4	.....	.....	.....	.....	.....
1 7/8	.....	.....	.....	.....	.....
2	.....	.....	.....	6352	9999
2 1/2	.....	.....	.....	25301	.....
3	.....	.....	.....	25302	.....

Width Inches	Catalogue Numbers: Special Service	Standard Non-Elastic	Special Non-Elastic	Light Twill	Standard Service
1/2	.....	25014	.....	....	7699
5/8	.....	25015	.....	....	18460
3/4	19003	25016	25020	....	5281
1	15618	25018	13238	6291	5224
1 1/4	19004	4096	14671	6290	5298
1 1/2	18146	25019	25021	6289	8870
1 3/4	.....	4097	.....	....	.....
2	18486	4098	19006	4544	9058
2 1/4	19750	.....	.....	....	10449
2 1/2	16139	.....	.....	....	15859
2 3/4	16130	.....	.....	....	.....
3	.....	.....	.....	....	15861

Hope Grey Cotton Sleeving

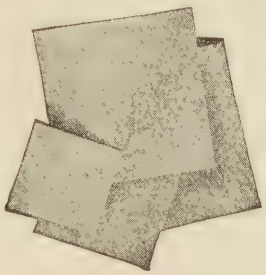
Cat. No.	Covers Size Wire	Approx. Yards per Lb.	Cat. No.	Covers Size Wire	Approx. Yards per Lb.
0	14–20	630	8	1–2	80
1	11–12–13	235	9	1–2	110
2	7–8–9	170	10	1–0	60
3	9–10	140	11	1–0	70
4	5–6–7	220	12	2 No. 0	60
5	5	125	13	6–7	175
6	3–4	140	..	...	...

Also furnished in red, blue and black.
Standard package, 5-pound spool.

Vulcanized Fibre Sheets

Red, Black or Gray

Intermediate sizes at price of next thinner, except that on sizes from 1/8-inch and up a variation of .015 inch or less will not be considered intermediate and will take the price of the nearest standard thickness. Extra charge for cutting.



Thickness In.	Price per Lb.	Thickness In.	Price per Lb.	Thickness In.	Price per Lb.
.005	$.50	.075	$.50	7/8	$.70
.010	.50	.100	.50	1	.76
.015	.50	1/8	.50	1 1/8	.86
.020	.50	3/16	.51	1 1/4	1.00
.025	.50	1/4	.51	1 3/8	1.15
.030	.50	5/16	.51	1 1/2	1.30
.035	.50	3/8	.53	1 5/8	1.50
.040	.50	1/2	.56	1 3/4	1.80
.045	.50	5/8	.60	1 7/8	2.20
.060	.50	3/4	.66	2	2.60

Approximate Weight of Sheets

Thickness In.	Wt. Lbs.	Thickness In.	Wt. Lbs.	Thickness In.	Wt. Lbs.	Thickness In.	Wt. Lbs.	Thickness In.	Wt. Lbs.
.005	.8	.035	5.6	1/8	20	5/8	100	1 3/8	215
.010	1.6	.040	6.4	3/16	30	3/4	120	1 1/2	235
.015	2.4	.045	7.2	1/4	40	7/8	138	1 5/8	250
.020	3.2	.060	9.6	5/16	50	1	155	1 3/4	275
.025	4.	.075	12.	3/8	60	1 1/8	175	1 7/8	290
.030	4.8	.100	16.	1/2	80	1 1/4	195	2	315

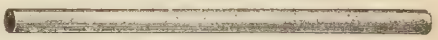
Approximate Size of Sheets

.005 to .120 inch thick, 48x80 inches; 1/8 to 3/4 inch thick, 44x70 inches; 13/16 to 2 inches thick, 46x76 inches.

We can also furnish fibre up to .025 inch thick, in rolls about 46 inches wide.

Vulcanized Fibre Rods

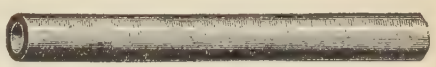
Red, Black or Gray



Diameter Inches	Feet per Pound	Price per Foot	Diameter Inches	Feet per Pound	Price per Foot
3/32	241	$.34	15/16	2.4	$2.20
1/8	136	.34	1	2.1	2.60
3/16	60	.34	1 1/8	1.7	3.20
1/4	34	.36	1 1/4	1.4	4.00
5/16	22	.40	1 3/8	1.1	4.80
3/8	15	.44	1 1/2	.94	5.60
7/16	11	.54	1 5/8	.80	7.00
1/2	8.5	.66	1 3/4	.69	9.00
9/16	6.7	.80	1 7/8	.60	13.00
5/8	5.4	.94	2	.53	17.00
11/16	4.5	1.12	2 1/8	.47	21.00
3/4	3.8	1.36	2 1/4	.42	25.00
13/16	3.2	1.60	2 3/8	.38	29.00
7/8	2.8	1.88	2 1/2	.34	33.00

Vulcanized Fibre Tubing

Red, Black or Gray



Inside Diam. In.	Price, per Foot — Wall, Inches: 1/16	3/32	1/8	5/32	3/16	7/32	1/4
1/4	$.24	$.28	$.36	$.44	$.52	....	....
3/8	.28	.32	.42	.52	.62	....	....
1/2	.32	.36	.48	.60	.72	$.84	$.96
5/8	.36	.42	.56	.70	.84	.98	1.12
3/4	.42	.48	.64	.80	.96	1.12	1.28
1	.50	.60	.80	1.00	1.20	1.40	1.60
1 1/4	.58	.72	.96	1.20	1.44	1.68	1.92
1 1/2	.64	.84	1.12	1.40	1.68	1.96	2.24

Prices for intermediate and larger sizes quoted on application.

Nos. 1 and 11 India Micanite Plate
For Molding

No. 1 India Micanite Plate has a smooth surface which does not show any detrimental amount of loose laminations. It softens sufficiently at 140 degrees C. or 284 degrees F. to be readily molded to ordinary shapes without chipping, cracking or breaking.

It is carefully milled to specified thickness, allowing a variation of .002-inch in isolated spots on the thin sizes below .060-inch, and from .003-inch to .005-inch on sizes .060-inch and up.

Average puncture voltage per .001-inch runs from 900 volts on the thinner sizes to 800 volts on the thicker sizes. It must not be used for insulation between copper bars of commutators.

No. 11 India Micanite Plate is made of the same quality of mica films and cement that are used in our No. 1 Plate, but it is not as exact to thickness, and is not made in as many thicknesses. It varies in thickness from plus or minus .003-inch in the case of the .010-inch thick; .005-inch in the case of the 1/32-inch; to plus or minus .010-inch in the case of the 1/8-inch thick.

It becomes flexible when heated, is readily formed into shapes, and is suitable for all general purposes where a variation in thickness is permissible, except for commutator segments, for which it is not intended.

Average puncture voltage, 800 to 900 volts per .001-inch.

No. 1

Cat. No.	Thickness Inches	Thickness MM.	Approx. Lbs. per Sheet	Price per Lb.
1202	.020	0.508	1.05	$3.00
1203	.025	0.635	1.3	2.55
1204	.030	0.762	1.6	2.10
1205	1/32	0.79	1.7	2.10
1206	.035	0.889	1.85	2.10
1207	.040	1.016	2.1	1.95
1208	.045	1.143	2.35	1.95
1210	.050	1.27	2.65	1.95
1213	1/16	1.58	3.3	1.70
1216	3/32	2.38	5.	1.70
1217	1/8	3.17	6.5	1.70

No. 11

Cat. No.	Thickness Inches	Thickness MM.	Approx. Lbs. per Sheet	Price per Lb.
1218	.010	0.254	.503	$3.00
1219	.015	0.381	.748	2.75
1220	.020	0.508	.946	2.40
1223	1/32	0.79	1.64	1.70
1227	3/64	1.185	2.42	1.60
1231	1/16	1.58	3.32	1.45
1234	3/32	2.38	4.92	1.45
1235	1/8	3.17	6.22	1.45

Nos. 1 and 11 Micanite Plate furnished in special thicknesses, sizes and patterns. Prices quoted upon application.

No. 2 India Micanite Plate
For Commutator Segment Insulation

No. 2 Micanite Plate is made of India Mica, as this variety is recognized as standard for electrical insulation where muscovite mica is used.

It is closely milled and the average thickness will not vary more than .0005-inch from specified thickness. Individual plates will not vary more than .001-inch above or .0015-inch below thickness specified in isolated spots. It cannot be molded.

Its average puncture voltage per .001-inch runs from 900 volts on the thinner sizes, to 800 volts on the thicker sizes.

Cat. No.	Thickness Inches	Thickness MM.	Approx. Lbs. per Sheet	Price per Lb.
1238	.020	0.508	1.2	$2.65
1239	.025	0.635	1.5	2.45
1240	.030	0.762	1.8	2.20
1241	1/32	0.79	1.9	2.20
1242	.035	0.889	2.1	2.20
1243	.040	1.016	2.4	1.90
1244	.045	1.143	2.7	1.90
1245	3/64	1.185	2.85	1.90
1246	.050	1.27	3.	1.90
1248	.060	1.524	3.6	1.90
1249	1/16	1.58	3.8	1.90

No. 2 Micanite Plate can be furnished in special thicknesses, sizes, or patterns. Prices quoted upon application.

No. 3 Amber Micanite Plate
For Commutator Segment Insulation

No. 3 Amber Micanite Plate is made of phlogopite or amber mica, which is softer than the muscovite and presents less liability of failure to wear down evenly with the copper bars.

It is closely milled and the average thickness will not vary more than .0005-inch from the specified thickness. Individual plates will not vary in isolated spots more than .001-inch above or .0015-in. below thickness specified. It cannot be molded.

Its average puncture voltage per .001-inch runs from 850 volts on the thinner sizes to 700 volts on the thicker sizes.

Cat. No.	Thickness Inches	Thickness MM.	Approx. Lbs. per Sheet	Price per Lb.
1272	.020	0.508	1.2	$4.75
1273	.025	0.635	1.5	4.50
1274	.030	0.762	1.8	4.25
1275	1/32	0.79	1.9	4.25
1276	.035	0.889	2.1	4.25
1277	.040	1.016	2.4	4.00
1278	.045	1.143	2.7	4.00
1279	3/64	1.185	2.85	4.00
1280	.050	1.27	3.	4.00
1282	.060	1.524	3.6	4.00
1283	1/16	1.58	3.8	4.00

No. 3 Micanite Plate can be furnished in special thicknesses, sizes and patterns.

Prices quoted on application.

No. 4 Micanite Plate
For Flat Work

This plate is made for flat work and for purposes where accuracy of thickness is not important. It is not milled or surfaced and therefore has a considerable variation in thickness.

It is suitable for all kinds of bases, round or square washers, and for all kinds of apparatus not subject to high heat.

Its non-liability to fracture under extreme vibration is a valuable feature for marine work. It does not take a screw thread, but can be drilled and turned.

Average puncture voltage, approximately 800 volts per .001-inch.

No. 4 plate is not furnished thinner than 1/16-inch.

Cat. No.	Thickness Inches	Thickness MM.	Approx. Lbs. per Sheet	Price per Lb.
1296	1/16	1.58	3.25	$1.25
1297	3/32	2.38	4.87	1.25
1298	1/8	3.17	6.5	1.25
1300	1/4	6.34	13.	1.25
1301	3/8	9.52	19.5	1.25
1302	1/2	12.69	26.	1.25

Prices on sheets of No. 4 Micanite Plate, of special size and pattern quoted upon application.

No. 5 Flexible Micanite Plate
For Cold Forming

No. 5 Flexible Micanite is made of very thin films of muscovite mica cemented together with a special insulating cement of great flexibility and adhesiveness. This article in many ways presents mica in its most convenient and economical form for electrical insulation. It can be formed or bent to shape without application of heat.

It is an excellent insulator for armature slots, armature, magnet and commutator cores, transformers, field coils, etc.

No. 5 Flexible Micanite Plate cannot be surfaced like No. 1 No. 2, or No. 3 plate. It is therefore subject to some variation in thickness, running from .002-inch to .003-inch on the thinner sizes; from .005-inch to .007-inch on the 1/32-inch thickness, and from .010-inch to .015-inch on the 1/8-inch thickness.

Its average puncture is approximately 600 volts per .001-inch.

Cat. No.	Thickness Inches	Thickness MM.	Approx. Lbs. per Sheet	Price per Lb.
1303	.005	0.127	.55	$3.15
1304	.010	0.254	1.	2.00
1305	.015	0.381	1.45	1.75
1306	.020	0.508	1.9	1.75
1307	.025	0.635	2.3	1.60
1309	1/32	0.79	3.	1.60
1313	1/16	1.58	6.	1.55
1314	1/8	3.17	12.	1.55

Prices on No. 5 Micanite plate of special thickness, size, or pattern, quoted upon application.

Uncut Sheet Mica

Uncut mica is carefully selected as to quality and sizes it will cut. The diffirent grades will cut assorted sizes as shown in table. All grades are closely trimmed.

India
Will Cut Assorted Sizes

Grade No.							Price per Pound
A1	4	to 6	Inches Wide, 7	to 9	Inches Long		$9.00
1	3	to 5	Inches Wide, 5	to 7	Inches Long		7.00
2	1½	to 3½	Inches Wide, 4½	to 6	Inches Long		5.50
3	1½	to 3	Inches Wide, 3	to 4½	Inches Long		4.25
4	1½	to 2½	Inches Wide, 2½	to 3	Inches Long		3.25
5	1	to 2	Inches Wide, 2	to 2½	Inches Long		1.90

Amber

Grade No.						Price per Pound
A1	4	to 5	Inches Wide, 7	to 9	Inches Long	$5.00
1	3	to 6	Inches Wide, 5	to 7	Inches Long	3.25
2	1½	to 3½	Inches Wide, 4½	to 6	Inches Long	2.50
3	1½	to 3	Inches Wide, 3	to 4	Inches Long	1.80
4	1½	to 2½	Inches Wide, 2½	to 3	Inches Long	1.25
5	1	to 2	Inches Wide, 2	to 2½	Inches Long	.65

No. 20 Micanite Cloth

No. 20 Micanite Cloth is made with 1, 2 or 3 layers of high-grade India Mica films, cemented together with overlapping edges into sheet form, the sheet being faced on one side with cotton cloth and the other side with Japanese paper.

It is an excellent composite insulation, the cloth adding mechanical strength, and is often used in conjunction with Empire Cloth and Paper, fish paper, etc., for transformers, field magnets and armature cores. In strip or tape form No. 20 Micanite Cloth is an efficient insulation for wrapping all sorts of conductors, and can be furnished any width from ½ to 36 inches, in rolls approximately 3¾ inches in diameter.

Cat. No.	Thickness Inches	Thickness MM.	Layers of Mica	Approx. Lbs per Roll	Price per Lb.
1315	.008	0.203	1	3.3	$3.50
1316	.011	0.279	2	5.2	3.00
1317	.014	0.356	3	7	2.40

No. 24 Micanite Paper

No. 24 Micanite paper is of the same nature as No. 20 Micanite Cloth except that the material is faced on both sides with Japanese tissue paper instead of cotton cloth, the object being to supply an insulation thinner than Micanite Cloth, but retaining the same thickness of mica film.

Cat. No.	Thickness Inches	Thickness MM.	Layers of Mica	Approx. Lbs. per Roll	Price per Lb.
1321	.005	0.127	1	2.4	$3.50
1322	.008	0.203	2	4.2	3.00
1323	.011	0.279	3	6.	2.50

Empire Paper

Approximate Width 36 Inches—Price per Linear Yard

Yellow Varnished Paper

No.	Less Than 100 Sq. Yds.	100 Sq. Yds. and Over	Thick. Inches	Base Paper
75	$.19	$.145	.00075	Condenser Paper
100	.19	.145	.001	Condenser Paper
101	.19	.145	.0015	Condenser Paper
102	.19	.145	.002	Condenser Paper
103	.20	.155	.003	Condenser Paper
444	.21	.165	.004	Bond Paper
555	.23	.20	.005	Bond Paper
106	.24	.21	.006	Bond Paper

Yellow and Black Varnished Paper

No. Yellow	No. Black	Less Than 100 Sq. Yds.	100 Sq. Yds. and Over	Thick. In.	Base Paper
104	1104	$.15	$.125	.004	Kraft Paper
105	1105	.16	.135	.005	Kraft Paper
		.17	.145	.007	Kraft Paper
108	1108	.18	.155	.008	Kraft Paper
110	1110	.21	.185	.010	Kraft Paper
112	1112	.22	.195	.012	Kraft Paper
115	1115	.27	.245	.015	Kraft Paper
118	1118	.35	.325	.018	Kraft Paper
120	1120	.35	.325	.020	Kraft Paper
107	1107	.20	.175	.007	Gray Rope Paper
109	1109	.23	.20	.009	Gray Rope Paper

Varnished Red Rope Paper

Thickness.................inches	.007	.010	.012	.015
Less Than 100 Sq. Yds...........	$.20	$.24	$.28	$.36
100 Sq. Yds. and Over...........	.175	.205	.25	.325

Empire Yellow and Black Varnished Canvas and Duck

Approximate Width 36 Inches—Price per Linear Yard

Put up in standard 25-yard rolls.

Thickness Inches	Yellow No.	Yellow Less Than 100 Sq. Yds.	Yellow 100 Sq. Yds. and Over	Black No.	Black Less Than 100 Sq. Yds.	Black 100 Sq. Yds. and Over
.016	16	$.44	$.40	1600	$.44	$.40
.020–.022	20	.49	.45	200	.49	.45
.024–.026	24	.54	.50	240	.54	.50
.030–.032	32	.69	.65	320	.60	.56
.034–.035	35	.79	.75	350	.69	.65
.037	..	.82	.78	...	.72	.68
.040	..	.89	.85	...	.74	.70

Super-Micanite Plate

Super-Micanite is made with a synthetic cement or binding material, whereas Micanite, and in fact all other similar mica installations, are made with a cement of shellac.

The use of this synthetic cement as a binder has resulted in a superior mica insulation. Super-Micanite means less trouble in the manufacture of commutators, longer life for electrical apparatus, added dependability, fewer breakdowns, reduced maintenance. Its specific advantages will be furnished on request.

Super-Micanite is particularly recommended for commutator insulation work, armatures, field magnets, electric heating units and for high tension work in general.

Prices are approximately 10 per cent higher than prices of Standard Micanite.

Empire Seamless Bias Varnished Tape

Price per Gross (144) Yards

Empire Varnished Tape (Seamless Bias) is the trade name under which is sold Empire Insulating Cloths in tape form. It provides in convenient form for such uses as coils, cables and bus bar insulations.

This tape insures a smooth, uniformly protected insulated tape. Can be hand or machine applied, and special length coils are supplied for coil winding machines. Saves both time and money in application, as every inch is usable, and in service gives a better job, doing away with plain woven tapes, thus eliminating need of impregnation.

Standard rolls are 36 and 72 yards long.

Size Inches	No. 72 Yellow, No. 763 Black, .007 In. Thick — Less Than 100 Sq. Yds.	100 Sq. Yds. and Over	No. 71 Yellow, No. 74 Black, .007 In. Thick — Less Than 100 Sq. Yds.	100 Sq. Yds. and Over	No. 10 Yellow, No. 99 Black, .010 In. Thick — Less Than 100 Sq. Yds.	100 Sq. Yds. and Over
½	$1.90	$1.58	$1.98	$1.68	$2.14	$1.82
¾	2.76	2.30	2.90	2.44	3.10	2.66
1	3.62	3.04	3.80	3.22	4.08	3.48
1¼	4.52	3.80	4.76	4.02	5.10	4.36
1½	5.50	4.62	5.78	4.88	6.20	5.30

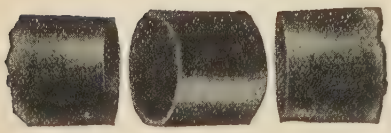
Size Inches	No. 101 Yellow, No. 104 Black, .010 In. Thick — Less Than 100 Sq. Yds.	100 Sq. Yds. and Over	No. 125 Yellow, No. 123 Black, .012 In. Thick — Less Than 100 Sq. Yds.	100 Sq. Yds. and Over	No. 126 Yellow, No. 127 Black, .012 In. Thick — Less Than 100 Sq. Yds.	100 Sq. Yds. and Over
½	$1.94	$1.64	$2.04	$1.72	$2.18	$1.86
¾	2.82	2.38	2.96	2.52	3.18	2.72
1	3.72	3.12	3.90	3.30	4.16	2.58
1¼	4.64	3.90	4.86	4.14	5.20	4.46
1½	5.64	4.76	5.92	5.02	6.34	5.44

Additional charges are to be added to gross yard price for rolls other than standard rolls.

Can be supplied packed in oil; prices on application.

Orangeburg Fibre Conduit

Harrington (Sleeve) Joint Type



Orangeburg Fibre Conduit is manufactured by The Fibre Conduit Company at Orangeburg, New York and Richmond, Indiana. These two plants are equipped with the most modern machinery for the manufacture of fibre conduit and are devoted to the manufacture of this product.

Orangeburg Fibre Conduit is made from wood fibre. The conduits are dried in automatic driers and then thoroughly impregnated with a preserving compound. The ends of the conduits are accurately machined to insure tight joints.

During the entire process of manufacture many inspections are made to insure that the finished product meets the most exacting specifications.

During the past 41 years many millions of feet of Orangeburg Fibre Conduit have been installed in underground systems under all conditions of soil and climate.

Recent improvements in manufacturing processes have resulted in an even better Orangeburg Conduit. This improved conduit has the following outstanding advantages:

1. Extremely high resistance to water absorption.
2. Higher crushing strength.
3. Higher bending strength.
4. Higher impact resistance.
5. Greater resistance to flattening.

Standard conduit length in all sizes from 1 to 6 inches inclusive is 5 feet; 8-foot lengths are also standard in sizes 2½ to 4½ inches inclusive.

One coupling is supplied with each length.

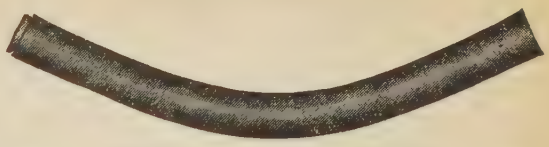
Inside Diameter Inches	Wt., Lbs. per Foot	Approx. No. Feet *Minimum Carload
1	.60	50000
1½	.85	35300
2	1.05	28575
2½	1.30	23080
3	1.60	18750
3½	1.90	15790
4	2.30	13045
4½	2.65	11325
5	3.25	9235
6	4.25	7060

*Minimum carload, 30000 pounds.

Socket joint conduit supplied on special request.

Orangeburg Fibre Conduit Bends

Harrington (Sleeve) Joint



45° Bend—5 Feet Long, 36-Inch Radius

90° Bend—5 Feet Long, 36-Inch Radius

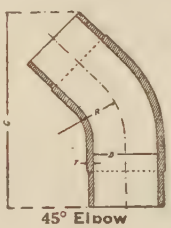
S Bend—5 Feet Long, Offset 20 Inches

One coupling is supplied with each bend or elbow.

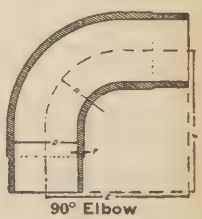
I.D. In.	Radius Standard Bends, Inches 45° and 90°	S Bends (20 Inch Offset)	I.D. In.	Radius Standard Bends, Inches 45° and 90°	S Bends (20 Inch Offset)
1	18–24–36	36	3½	36	36
1½	18–24–36	36	4	36	36
2	18–24–36	36	4½	36	36
2½	24–36	36	5	36	36
3	36	36	6	36	36

Orangeburg Fibre Conduit Elbows

45° and 90° Elbows



45° Elbow



90° Elbow

Size Inches	Standard Radius Inches 45° Elbow	90° Elbow	Size Inches	Standard Radius Inches 45° Elbow	90° Elbow
1	2.0	5.75	3½	3.0	15.0
1½	2.5	8.25	4	3.5	16.0
2	2.5	9.50	4½	4.5	18.0
2½	2.5	10.50	5	5.0	24.0
3	3.0	13.00	6	6.0	....

Socket joint type bends and elbows will be supplied upon special request.

Orangeburg Fittings

Fittings such as manhole bells, plugs, fibre conduit to metal conduit adapters and reducers, fibre to fibre adapters and reducers, etc., are available. Information regarding such fittings and specialties gladly furnished on request.

Orangeburg Fibre Conduit Field Tooling Machines

A light weight, readily portable field tooling machine selling at a nominal price is available for use in milling joints on the job. This machine permits of satisfactory joints being in the field with a minimum expenditure of time and labor. Price information and further details of this machine furnished on request.

Natco Standard Single Duct Conduit

Adapted for high tension power lines, single cable terminals or for low tension laterals, as in telephone or signal lines.

In building up duct banks, this conduit provides two heavy insulating walls between adjacent cables, and permits breaking or staggering of all joints throughout the duct bank.

Permits the splaying or separation of individual duct lines in approaches to manholes.

Conduit is scarified lengthwise on the four outer sides, to provide anchorage for bedding mortar.

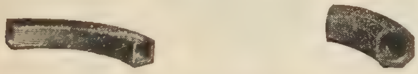
The inner edges of the duct entrances are properly bevelled and smoothed to eliminate projections and to make safe the pulling of cables.

Certain square single duct shapes are provided with through dowel holes in the corners, permitting the use of steel dowel pins for assembling, centering and aligning such duct lines.

Standard length, 18 inches, except in the 5¼-inch round bore shape which is 24 inches long. Short lengths as shown in table, are available for staggering joints.

Nominal Bore In.	No. Duct Holes	Std. Lgth. In.	Duct Ft. per Pc.	Actual Size Duct Hole In.	Approx. Outside Dimen. In.	Made in Short Lgths. In.	Min. Carload Duct Ft.
3¼ Rd.	1	18	1½	3⅜	4½x4½	3,4,6,9,12	7800
3½ Rd.	1	18	1½	3⅝	4⅞x4⅞	3,4,6,9,12	6900
4¼ Rd.	1	18	1½	4⅜	5⅝x5⅝	3,4,6,9,12	5700
5¼ Rd.	1	24	2	5⅜	6⅞x6⅞	3,4,6,8,12	4000
3¼ Sq.	1	18	1½	3⅜	4¾x4¾	3,4,6,9,12	6100
3½ Sq.	1	18	1½	3⅝	5 x5	3,4,6,9,12	5700
4¼ Sq.	1	18	1½	4⅜	5⅞x5⅞	3,4,6,9,12	4800

Natco Single Duct Bends



Standard Shapes

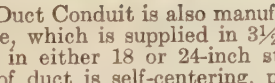
Bore..............	3¼,3½ or 4¼	Round or Square
Angle..............	45°	90°
Radius......inches	12,18,24 or 36	12,18,24

Arc or Length

Bore.........inches	3¼,3½ or 4¼ Rd.	3¼,3½ or 4¼ Sq.
Length.......inches	18	18
Radius......inches	36,60,72 or 96	36,60,72 or 96

Bends also supplied that are scored for splitting apart.

Natco Socket Joint Single Duct Conduit

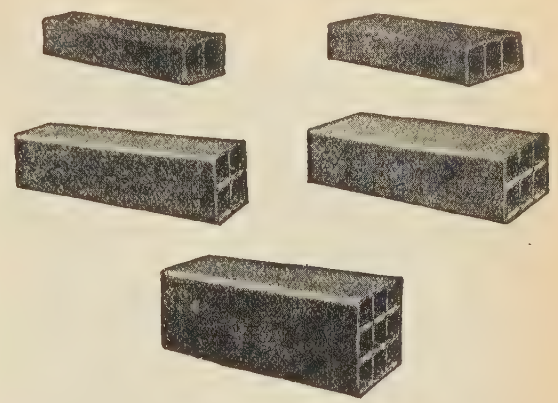


Natco Single Duct Conduit is also manufactured in a new socket joint type, which is supplied in 3½, 4 and 4½-inch round bore and in either 18 or 24-inch standard lengths. This new type of duct is self-centering, provides positive alignment, lays up fast and can be installed by ordinary labor. If desired, the joints may be readily troweled or sealed with cement mortar. This new type of conduit is especially adapted for single duct lateral lines, also equally suitable for duct bank construction where this type of joint is preferred.

Nominal Bore.....inches	3½ Rd.	4 Rd.	4½ Rd.
Length...........inches	18 and 24	24	24
Actual Size of Duct Holes...........inches	3⅝	4⅛	4⅝

Also furnished in bends and mitred sections.

Natco Standard Multiple Duct Conduit



Particularly adapted for telephone, telegraph, railway signal, fire alarm and low tension light and power service. The large units are economical and quick to install, due to their longer lengths and multiplicity of duct holes.

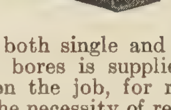
At the extreme ends of each piece of conduit, a smooth surface is left to permit wrapping each joint with tape or fabric to exclude joint mortar from the ducts.

Supplied in either 3¼, 3½ or 4¼-inch square bore shapes and in 2, 3, 4, 6 and 9-way multiple shapes.

The 3¼ inch is the standard bore, while 4¼ inch is the over-size bore, for most telephone service and for certain low tension power and lighting systems, while the 3½ inch bore is frequently specified for certain municipal installment.

Nominal Bore In.	No. Duct Holes	Std. Lgth. In.	Duct Ft. per Pc.	Actual Size Duct Hole In.	Approx. Outside Dimen. In.	Made in Short Lgths. In.	Min. Carload Duct Ft.
3¼ Sq.	2	24	4	3⅜	4¾ x 8¾	6, 8, 12	7600
3¼ Sq.	3	24	6	3⅜	4¾ x12¾	6, 8, 12	7500
3¼ Sq.	4	36	12	3⅜	8¾ x 8¾	6, 9, 12	8400
3¼ Sq.	6	36	18	3⅜	8¾ x12¾	6, 9, 12	9000
3¼ Sq.	9	36	27	3⅜	12¾ x12¾	6, 9, 12	9000
3½ Sq.	2	24	4	3⅝	5⅛ x 9⅜	6, 8, 12	6400
3½ Sq.	3	24	6	3⅝	5⅛ x13⅝	6, 8, 12	6900
3½ Sq.	4	36	12	3⅝	9⅜ x 9⅜	6, 9, 12	7500
3½ Sq.	6	36	18	3⅝	9⅜ x13⅝	6, 9, 12	8100
4¼ Sq.	2	24	4	4⅜	5$\frac{15}{16}$x11	6, 8, 12	5200
4¼ Sq.	3	24	6	4⅜	5$\frac{15}{16}$x16$\frac{1}{16}$	6, 8, 12	5400
4¼ Sq.	4	36	12	4⅜	11 x11	6, 9, 12	6000
4¼ Sq.	6	36	18	4⅜	11 x16$\frac{1}{16}$	6, 9, 12	6300
4¼ Sq.	9	24	18	4⅜	16$\frac{1}{16}$ x16$\frac{1}{16}$	6, 8, 12	6800

Natco Split Conduit



Natco Conduit in both single and multiple duct shapes and in all standard bores is supplied, scored or knifed, for splitting apart on the job, for repairing or replacing duct lines, without the necessity of removing cables.

These split sections may be also used to enclose cable joints or splices in place of building manholes.

Bore Inches	No. of Duct Holes	Standard Length Inches	Short Lengths Inches
3¼, 3½ or 4¼ Rd.	Sgl. Duct	18	6, 9, 12
3¼, 3½ or 4¼ Sq.	Sgl. Duct	18	6, 9, 12
3¼ Sq.	2 or 3-Way	18 and 24	6, 9, 12
3¼ Sq.	4 or 6-Way	18 and 36	6, 9, 12
3¼ Sq.	9-Way	18	6, 9, 12
3½ Sq.	2 or 3-Way	18 and 24	6, 9, 12
3½ Sq.	4 or 6-Way	18 and 36	6, 9, 12
4¼ Sq.	2 or 3-Way	18	6
4¼ Sq.	4 or 6-Way	18	6
4¼ Sq.	9-Way	18	6

Natco Mitred Conduit

For Curve Construction

Natco Conduit, both single and multiple duct, in all standard bores, is supplied in mitred shapes, for building either simple or intricate curves in lines of clay conduit, for transposing narrow duct banks into wide ones or vice versa, or for splaying duct lines to enter manholes or service points.

Natco Mitred Conduit is made in one standard cut—3 degree and 10-foot radius. The radius of curves built of these sections, is varied simply by interposing straight short pieces between the mitred sections, and the arc of such curves is governed simply by the total number of pieces used.

True and easy curves from 10 to 30 foot radius, and ranging from 3 to 90 degrees, can thus be built.

In the 2, 3 and 6-way multiple conduit, the mitred sections are supplied in either a flat or edge position.

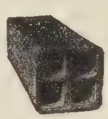
Mitred conduit also supplied scored for splitting apart.

Approximate length, 6x6⅝ inches. Number of pieces in 90° curve, 30.

Bore Inches	No. of Duct Holes	Position
3¼, 3½, or 4¼ Round	Single Duct	....
3¼, 3½, or 4¼ Square	Single Duct	....
3¼, 3½, or 4¼ Square	2, 3, or 6-Way	Flat or Edge
3¼, 3½, or 4¼ Square	4-Way	....
3¼ or 4¼ Square	9-Way	....

Natco Branch Conduit

For Dividing Multiple Duct Main Lines



Natco Multiple Duct Conduit is supplied in branch shapes in all standard bores.

Natco Branch Conduit is a new shape, one end of which is the same shape and size as standard conduit, while at the opposite end, certain ducts are more widely separated by means of double webs, so as to permit alignment with abutting branch lines.

Branch conduit permits the division of multiple duct main lines into two or more branch lines, each having a smaller number of ducts than the main line. Such a division is highly advantageous in splaying main duct lines into central office buildings, manholes or cable vaults, or for turning laterals or service connections. It frequently saves the necessity of manholes.

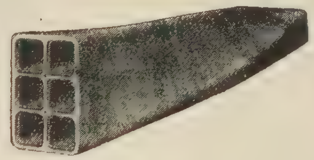
Also supplied scored for splitting apart.

Length, 24 inches.

Bore Inches	No. of Duct Holes	Type	For Branching Into
3¼, 3½ or 4¼	2-Way	1–1	2 Single Duct
3¼, 3½ or 4¼	3-Way	1–2	1 Single and 1 Two-Way
3¼, 3½ or 4¼	3-Way	1–1–1	3 Single Duct
3¼, 3½ or 4¼	4-Way	2–2	2 Two-Way
3¼, 3½ or 4¼	6-Way	2–4	1 Two-Way and 1 Four-Way
3¼, 3½ or 4¼	6-Way	2–2–2	3 Two-Way
3¼, 3½ or 4¼	6-Way	3–3	2 Three-Way
3¼, or 4¼	9-Way	3–6	1 Three-Way and 1 Six-Way

Natco Transposition Conduit

For Transposing or Twisting 2, 3 and 6-Way Conduit Lines



Natco Multiple Duct Conduit is also supplied in transposition shapes in 2, 3 and 6-way multiples, with right or left-hand twist. The degree or angle of twist is 22½° for 3¼-inch bore shapes, 18° for 3½-inch bore shapes and 15° for 4¼-inch bore shapes, and the standard length is 24 inches.

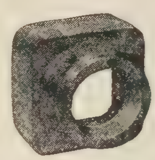
The number of pieces required to effect a quarter turn of 90° from a flat to an edge position, or vice versa, is four pieces in the 3¼-inch bore, five pieces in 3½-inch bore or six pieces in the 4¼-inch bore sizes.

These transposition shapes are of considerable advantage in changing the position or height of conduit lines, in order to avoid certain street obstructions, or to cross viaducts or bridges, or to change the position of cables on their approach to manholes or cable vaults, all of which frequently eliminates the need of manholes.

Bore.........................inches	3¼	3½	4¼
Twist..............................	22½°	18°	15°
No. of Pieces in ¼ Turn.............	4	5	6

Direction of twist, right or left hand.

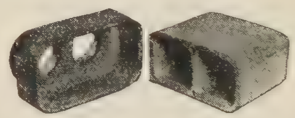
Natco Pipe Connectors



Single Duct Connector

2-Way Connector

3-Way Connector



Rear View of Connector Ready to Receive Conduit

For the purpose of connecting clay conduit lines to iron pipe lines as in pole risers or to enter buildings, Natco Pipe Connectors are available in the sizes shown below.

These connectors are made of cast iron, one end is shaped to receive the end of the clay conduit line, while the opposite end of the connector is tapped and threaded to receive the iron pipe lines.

For connecting to smaller sizes of pipe, ordinary pipe bushings can be screwed into these connectors to accommodate any standard size pipe.

Single Duct Connector

For 3¼-inch bore conduit 3-inch pipe or 4¼-inch bore conduit 4-inch pipe.

2-Way Connector

For 3¼-inch bore conduit 3-inch pipe or 4¼-inch bore conduit 4-inch pipe.

3-Way Connector

For 3¼-inch bore conduit 3-inch pipe or 4¼-inch bore conduit 4-inch pipe.

No. 106 Natco Conduit

Illustrating the conversion of a 4-way multiple duct line into two 2-way multiple duct lines in an edge position, one of which is flexed or curved to one side in the direction of a pole and terminated in two riser iron pipe lines, ascending the pole, while the other 2-way line is transposed or twisted 90° from an edge to a flat position in a distance of 8 feet and then continued straight on in the form of standard 2-way multiple duct conduit—in a flat position.

Specifications

B—One-piece 4-way type 2-2 branch conduit, 2 feet long (for dividing the 4-way line into two 2-way lines).

E—Six pieces 2-way mitred conduit—edge position—3° 10-inch radius—6¼ inches long, (for flexing or curving one of the 2-way lines to one side in the direction of the pole. The angle of flexure shown is 18° but any angle of flexure divisible by 3, may be attained by varying the number of mitred pieces).

H—One-piece 2-way standard conduit, 2 feet long (laid in edge position—to extend the flexed 2-way line on towards pole).

R—One cast iron 2-way connector for 3-inch wrought iron pipe.

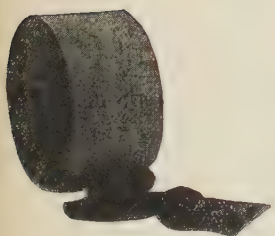
P—Four pieces 2-way left-hand transposition conduit, 22½°, 2 feet long (for transposing the other 2-way line 90° from an edge to a flat position).

Dowel Pins

Pressed steel pins, $\frac{5}{16}$x3 inches, with an integral central flange or collar, are generally used for joining or aligning individual sections of multiple duct, also certain sizes of square bore single duct conduit together.

Two pins are used at each joint or for each piece of conduit.

Joint Tape



An especially prepared tape is frequently used for wrapping the joints of multiple duct conduit prior to the application of the joint mortar, also occasionally used for wrapping joints of single duct conduit in trench, subway or masonry structures, prior to the pouring of the concrete encasement.

This tape has an adhesive waterproof coating on one side, and is supplied in 4 and 6-inch widths, and put up in rolls of 25 linear yards.

Tape adheres closely and firmly to the glazed surface of the conduit and aids in sealing the joints.

In ordering, specify total number of linear yards required.

Rainier Wood Conduit

This conduit is manufactured from yellow pine at the plant at Wilmington, North Carolina, and from Douglas fir at our plant at Centralia, Washington. An economical and satisfactory conduit for the carrying of all forms of lead cable and wires.

Comes in random lengths.

Outside Measurement..inches	5½x5½	5x5	4½x4½	3½x3½
Diameter Bore.....inches	4	3½	3	2

Each piece has a mortise at one end and a tenon on the other end.

It is in general use by the large telegraph companies and telephone companies all over the country and by many railroads.

Uses for which it is adapted:

Railroads.—Trunking, underground signal wires, high tension transmission lines, yard drainage where clay conduit is easily broken through, and system is usually placed on the surface of the ground.

Telephone Companies.—All underground work.

Telegraph Companies.—All underground work.

Police and Fire Alarm Systems.—For carrying wires, either high or low tension under ground.

Central Stations.—For distribution mains and services.

Specification Creosoted Conduit.—Free from large, unsound or loose knots, or other defects which would impair strength. Creosoted steam and vacuum treatment, dead oil of coal tar under pressure either 12 pounds per cubic foot (full cell) or 8 pounds per cubic foot (empty cell) as ordered.

Any additional information regarding the practicability of installing this conduit will be furnished upon request.

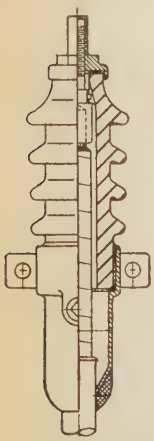
Prices on application.

General Cable Terminals

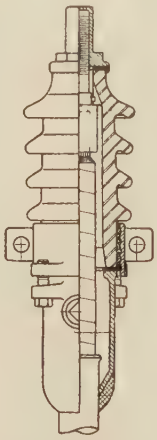
Herewith are illustrated a few of the typical models of cable terminals made by the General Cable Corporation.

In addition to the types illustrated we offer a complete line of terminals for every type of cable installation. All cable terminals are furnished in single conductor style. Multi-conductor terminals can be furnished in all styles except bolted gasket style. Various styles of cable entrances can be furnished, as illustrated.

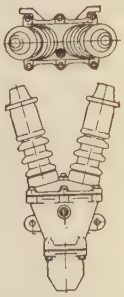
We welcome inquiries regarding cable problems.



Indoor and Outdoor Hoodnut Single Conductor (Outdoor Shown)

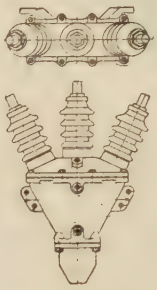


Bolted Gasket Indoor and Outdoor Hoodnut Single Conductor (Outdoor Shown)

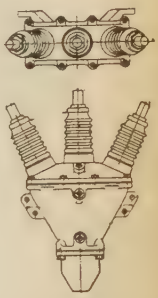


Flat Straightaway Disconnecting 2-Conductor

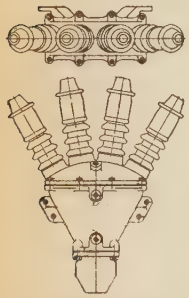
Flat Straightaway, Open End Insulator 2-Conductor (For Indoor Use)



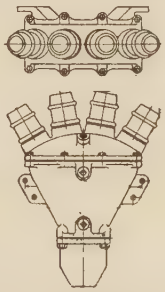
Flat Straightaway Outdoor Closed Hoodnut 3-Conductor



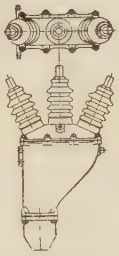
Flat Straightaway Indoor Closed Hoodnut 3-Conductor



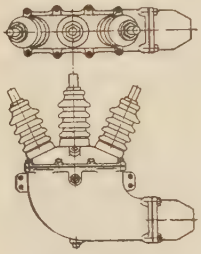
Flat Straightaway Disconnecting 4-Conductor



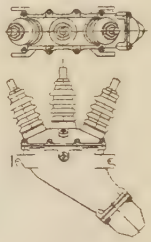
Flat Straightaway, Open End Insulator 4-Conductor (For Indoor Use)



Flat Edgewise 3-Conductor



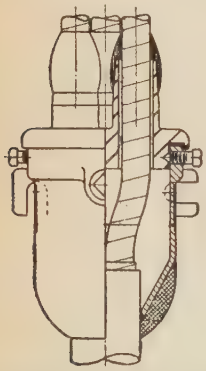
Right or Left Elbow 3-Conductor



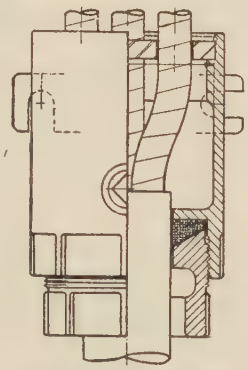
45° Angular 3-Conductor

Round 3-Conductor

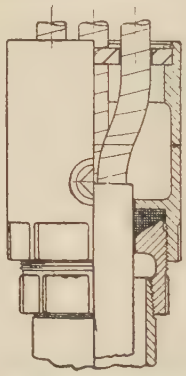
The Above Shapes Available in 2, 3 and 4 Conducters



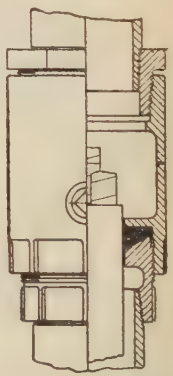
Molded Cap with Taping Cones—Type A Bell (Wiping) 600-Volt Control Terminal



Flat Cap—Type B Bell (Stuffing Box) 600-Volt Control Terminal



Flat Cap—Type C Bell (Pipe Connected) 600-Volt Control Terminal



Bell Fitted with Pipe Connection on Both Ends 600-Volt Control Terminal

Cable Entrances

These terminals are furnished in 3 types of cable entrances as shown above. In the case of the single conductor terminals, the entrances are integral with and really form the bell. In the multi-conductor terminals, they are separate and are bolted to the bell. They are interchangeable. As all types of entrances are drilled for the cable size, at the factory, it is necessary to fully specify the cable data when ordering.

Type A cable connection consists of plumber's wiped joint between cable sheath and terminal bell or wiping nipple.

Type B cable connection consists of a stuffing joint between cable and terminal. This joint is made tight by compressing suitable packing material around cable, between a gland and a gland nut. It can be used with either leaded or non-leaded cable, lead wool being used as the packing in the first case and jute in the second.

Type C connection consists of the Type B stuffing box joint, plus a conduit fitting which clamps around the conduit. This conduit fitting requires no thread on the conduit but can also be used on a conduit which has already been threaded.

Complete information gladly furnished on request.

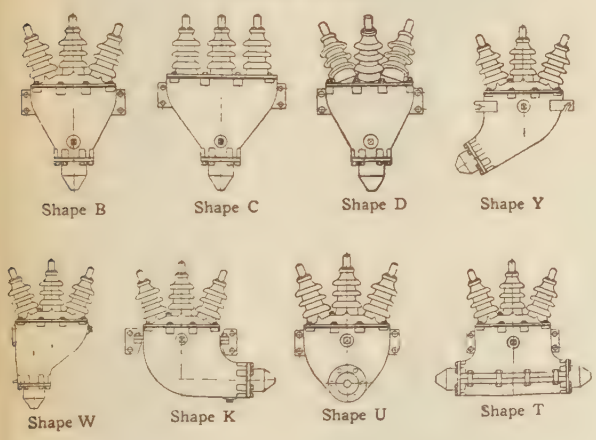
G & W Potheads

Designs of these potheads are the result of the co-operative effort of experienced distribution engineers.

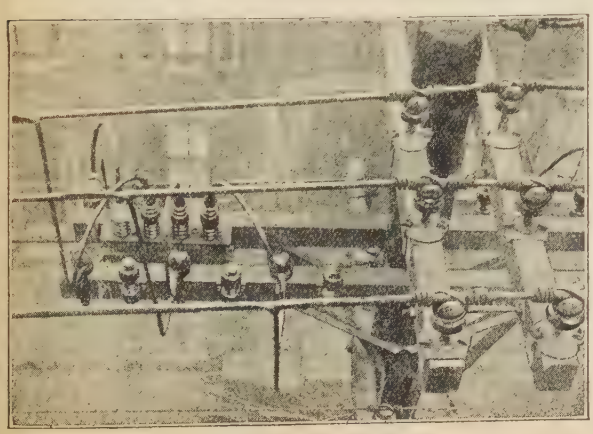
The wide machined flanges on body and lid are firmly clamped together with oil seal gasket between, using cap-screws evenly spaced all around. Suitable for upright or inverted installation. The interior of the potheads has been studied with the idea of proper balance of design, yet to provide generous creepage distances and spacings, and a large bending radius for multiple conductors. Holes for compounding are extra large and are closed with flanged and gasketed pipe plugs.

General use of porcelain of the counterbore design with gasketed flanges has proved successful in providing oil tightness. Porcelains are made by the vacuum process and are glazed inside and outside. Larger petticoats and relatively high percentage of wet to dry flashover are distinctive features.

Pothead Shapes

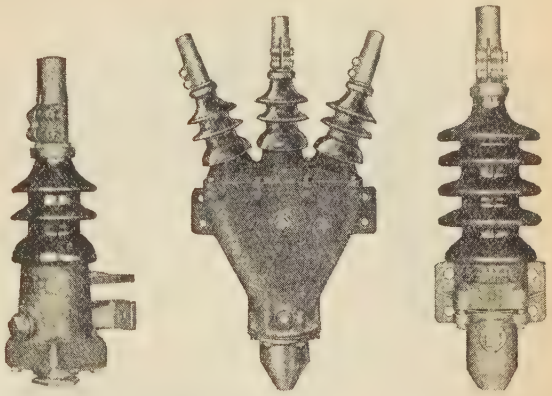


Typical Applications of G & W Potheads in Overhead Distribution Systems



G & W Type T Capnut Terminals

Definitely Oil-Tight Construction

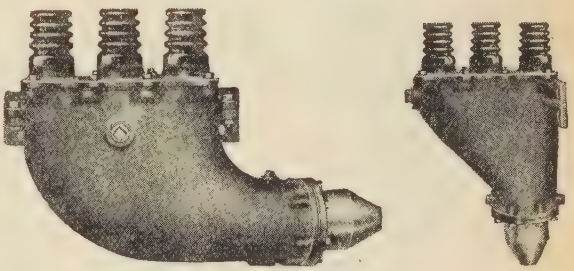


Modern cables are more highly impregnated with oil. The G & W Type T Outdoor, and Type NT Indoor Potheads are the ideal terminator for these cables as they provide a definitely oil tight seal.

Capnut terminals are extremely simple and effective. There are only 3 main parts. Non-rusting screws are used. Hoodnuts are locked and no threads are exposed. Several styles of interchangeable aerial lugs are available.

Type N Indoor Potheads

Without Connections

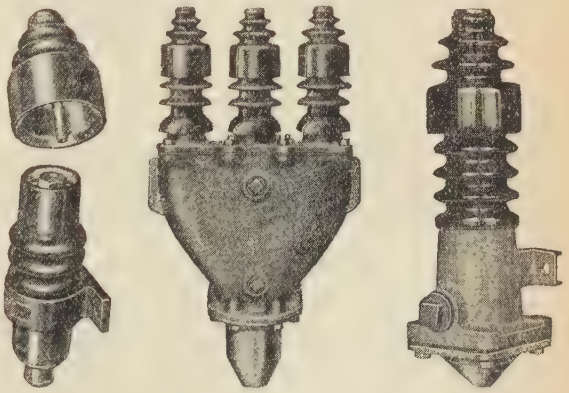


Type N Potheads are suitable for indoor use only. Standardized parts are used. Cable conductors are usually brought through the pothead without cutting and connected to devices beyond, which obviates the use of connectors.

There are several types of indoor potheads to fit various indoor installation requirements.

G & W Disconnecting Potheads

With Porcelain Caps Enclosing Connectors



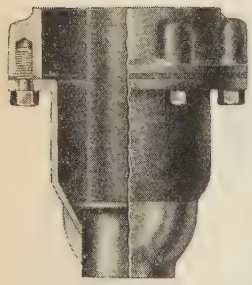
These disconnecting potheads are a simple means of giving a layout flexibility.

Disconnects and changes are made without cable cutting.

Easy isolation is possible by simply lifting off the porcelain cap. No live parts exposed.

Cable Entrance Fittings

Completely Interchangeable Wiping Sleeve



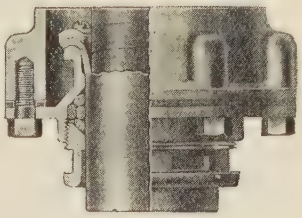
The wiping sleeve is of cast brass, suitable for making an ordinary wiped joint to lead sheathed cable.

The bottom part is conical shaped and is sawed off on the cone to fit the cable used.

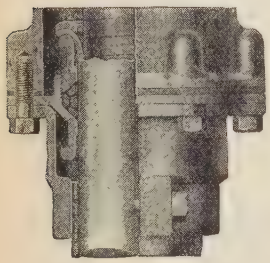
Combination Clamping Ring and Stuffing Box

The combination clamping ring and stuffing box gives the protective features of a wiped joint without requiring the time and skilled labor involved in wiping a joint.

It also provides a simpler installation when conduit couplings or armor clamps are used.



Conduit Coupling



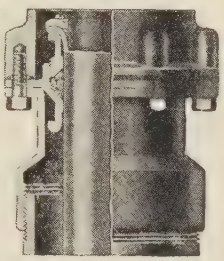
G & W conduit couplings are usually threaded to screw into standard steel or brass pipe.

They can be supplied reamed out to slip over fiber duct with set screws to hold in place.

Armor Clamp

The armor clamp is bolted to the pothead beneath the cable entrance.

The two halves are bolted together to firmly clamp the armored cable. Cannot be used with wiping sleeve unless specially arranged.



Stuffing Box

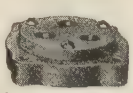
The plain stuffing box is cast with conical box and gland nut.

These parts are drilled for the cable.

This entrance is ordinarily supplied when cable diameter is not known and when couplings are used.

Also applicable to braided cable. Easily drilled out on the job.

Plain Bushing



The plain bushing essentially consists of a flanged plate and washer.

It can be used with multiple conductor cables or drilled with two or more separate holes for single conductor cables installed in a multiple conductor pothead.

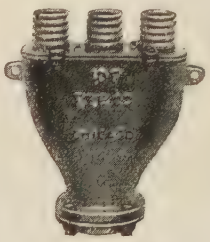
For lead covered cables, the sheath is belled over and clamped on the plate with the washer.

For braid covered cables the holes are countersunk and provided with individual stuffing boxes for the single conductor cables.

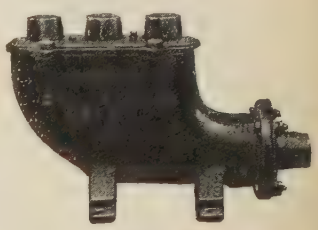
Three E Cable End Bells

Three E Cable End Bells, both indoor and outdoor, non-disconnecting and disconnecting, can be furnished in practically any shape and size to meet any installation condition.

When ordering, always specify the voltage of circuit, number of conductors, gauge of cable, exact overall diameter of cable, and type of joint required.



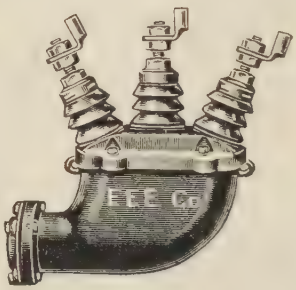
Type 10-F



Type 19-FS

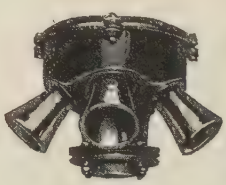
Type 21-FL

Type TC-82



Type TC-44

Type 24-F



Type 37-F

Type TC-50

Ask for Bulletin Giving Complete Information

General Cable Unit Package Splicing and Jointing Materials

For convenience of customers, the complete materials required for splices and joints on all types of cable are put up in handy unit package form. By purchasing splicing and jointing materials in this manner, an accumulation of dead stock in the store room is prevented and the time and expense of buying the various items required for the work from more than one source is saved.

When ordering, specify number and size of conductors, thickness of insulation and lead sheath and voltage rating.

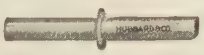
Ozite B Filling Compounds

Ozite B is a black asphaltic compound recommended for filling joints, terminals and junction boxes operated at normal temperatures, and up to and including 25000 volts.

This compound is manufactured under an improved process which results in a product with a low carbon content. Formulated by expert cable engineers with many years of experience, this compound combines all of the desirable characteristics that a jointing or filling compound should have.

Prices and complete information upon application.

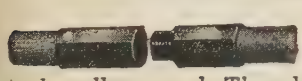
No. 9145 Hubbard Dowel Pins



In laying multiple duct clay conduit, these dowel pins are inserted in holes provided in the ends of the lengths and thus keep adjacent lengths in proper alignment and insure the smoothness of the ducts. Made of 5/16-inch round steel, 3 inches long.

Cat. No.	Size Inches	Ship. Wt., Lbs. per 100	Price per 100
9145	5/16x3	8	$1.30

Diamond Screw Duct Rods



Couplings are made of government bronze. The hickory used in the shaft is selected stock, well seasoned. Threads are accurately cut to 3/4-inch U.S.S., 10 threads per inch. Rivets are countersunk. Hickory shafts are 7/8 inch in diameter.

3-Foot Length.....each $1.65
4-Foot Length.....each 1.80

National Split Tinned Copper Connectors

For Splicing Underground Power Transmission Cables

N.E.L.A. Specification

These sleeves are split their entire length to enable the hot solder to flow evenly around the cable and are covered with a coating of tin to permit easy soldering. The ends are beveled so that there will not be the possibility of the building up of a high potential occasioned by sharp corners.

Cat. No.	Size Cond.	Diameter, Inches Cable	Approx. Inside Sleeve	Length Inches	Wt., Lbs. per 1000
325	12 A.W.G. Solid	.081	.086	1½	5
326	10 A.W.G. Solid	.102	.107	1½	5
327	10 A.W.G. Strand	.115	.120	1½	5
328	8 A.W.G. Solid	.128	.133	1½	6
329	6 A.W.G. Solid	.162	.169	1½	8
330	6 A.W.G. Strand	.183	.189	1½	12
331	5 A.W.G. Solid	.182	.189	1½	12
332	5 A.W.G. Strand	.206	.211	1½	15
333	4 A.W.G. Solid	.204	.211	1½	15
334	4 A.W.G. Strand	.231	.237	2	20
335	3 A.W.G. Solid	.229	.237	2	20
336	3 A.W.G. Strand	.261	.265	2	25
337	2 A.W.G. Strand	.291	.297	2	25
338	1 A.W.G. Strand	.330	.337	2	40
339	0 A.W.G. Strand	.375	.378	2	50
340	00 A.W.G. Strand	.420	.423	2	65
341	000 A.W.G. Strand	.470	.475	2	85
342	0000 A.W.G. Strand	.530	.533	2½	125
344	250000 C. M.	.575	.581	2½	150
345	300000 C. M.	.630	.635	2½	180
346	350000 C. M.	.679	.690	2½	210
347	400000 C. M.	.728	.740	3	280
348	450000 C. M.	.770	.784	3	320
349	500000 C. M.	.819	.826	3	340
350	550000 C. M.	.855	.868	3	410
351	600000 C. M.	.891	.906	3½	500
352	650000 C. M.	.927	.948	3½	520
353	700000 C. M.	.963	.983	3½	540
354	750000 C. M.	.999	1.018	3½	580
355	800000 C. M.	1.035	1.052	4	620
356	850000 C. M.	1.062	1.083	4	690
357	900000 C. M.	1.092	1.115	4	750
358	950000 C. M.	1.125	1.145	4	840
359	1000000 C. M.	1.152	1.175	4½	1030
360	1250000 C. M.	1.289	1.320	4½	1200
361	1500000 C. M.	1.412	1.440	5	1650
362	1750000 C. M.	1.526	1.560	5½	2100
363	2000000 C. M.	1.630	1.664	6	2725
364	2500000 C. M.	1.819	1.855	6½	3300

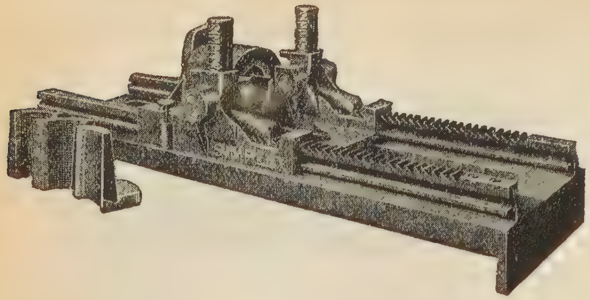
Empire Duct Rods

Furnished in 2 styles, tapered and straight. Tapered sticks are furnished when not otherwise specified. They measure 1¼ inches at the middle of the rod and taper to 1 inch at coupling. Straight sticks are furnished of uniform diameter 1 inch throughout.

Couplings are malleable iron. Ends are interchangeable. Axles are machined from brass rod, solid head and shouldered on coupling. Wheels are machined at hub to fit axle and shaped to conform to curve of duct. The rod is made of best selected straight grain well seasoned hickory, tapering to 1 inch at coupling.

Length.....feet	3	4
Price, with Wheels.....each	$1.45	$1.60
Price, without Wheels.....each	1.25	1.40

Simplex Pipe Pushing Jacks



Designed for pushing pipe through the most unfavorable soil conditions without crushing or distorting it. Can be operated by 2 or 4 men, depending upon soil conditions. When solid cribbing or blocking is difficult to obtain, it is then possible to hold the jack against the back pressure with one lever, while the other lever is being operated.

The duplex levers or sockets can be operated singly, alternately or together, depending on size of pipe, soil conditions and cribbing.

Each size of pipe requires a set of tapered jaws, as perfect gripping is necessary to avoid crushing the pipe.

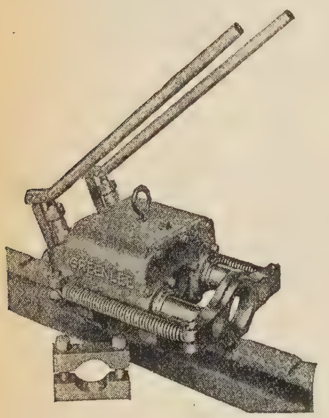
Furnished complete with one set of tapered jaws, two 1¼x42-inch steel lever bars and two 2-inch steel pipes for extending lever bars (5 feet long for No. 332 and 7 feet long for No. 334). Specify size tapered jaws required.

No.	Each	Extra Jaws per Set	Handles Pipe Diameter, Inches	Weight Pounds
332	**$110.00**	**$12.00**	¾, 1, 1¼, 1½ and 2	198
334	**150.00**	**15.00**	2, 2½, 3, 3½ and 4	305

Simplex Special Pilots

Size.....inches	**1¼**	**1½**	**2**	**2½**	**3**	**3½**	**4**
Weight..pounds	1	1¼	3	5	7½	10	11½
Price......each	**$.75**	**1.00**	**1.25**	**1.75**	**2.50**	**2.75**	**3.00**

No. 790 Greenlee Hydraulic Pipe Pushers



Eight operating speeds are available by changing location of rear pin in each lever. This gives various pressures, ranging from 6500 to 40000 pounds. One man can exert maximum pressure by pumping left-hand lever slow speed position. The other pressures and speeds are obtained by various combinations, using right or left-hand lever or both together.

Pipe can be pushed faster with this machine because it is only necessary to change pipe clamps every 4 to 7 feet, depending on length of rail used. Once rail has been set in position, after being bolted to cross skids or long plank and supported by wood cross member to prevent creeping, setting is complete. Pusher can be run up and down rail as many times as necessary without changing setting.

Can be converted from a pipe pusher into a pipe puller by reversing it on the rail.

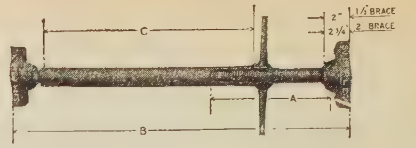
Capacity, 3 inch and smaller pipe. Equipment, in addition to rail, consists of a clamp for 1¼, 1½, 2, 2½ and 3-inch pipe, backing plate and pipe support casting.

Weight, exclusive of rail, 150 pounds.

No. **790**, with **5½**-Foot Rail for **4**-Foot Push...each **$275.00**
No. **790**, with **6½**-Foot Rail for **5**-Foot Push...each **280.00**
No. **790**, with **7½**-Foot Rail for **6**-Foot Push...each **285.00**
No. **790**, with **8½**-Foot Rail for **7**-Foot Push...each **290.00**

For shorter or longer rails than standard deduct or add $5.00 per foot.

Simplex Steel Trench Braces



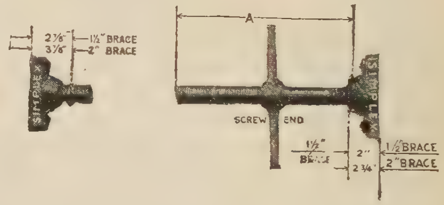
Simplex Trench Braces provide a safe, practical and economical bracing on all trench jobs. Ball and socket joints at each end permit quick adjustment and tight gripping at all angles. Once placed, a few turns of the screw handle fasten the brace tightly against the sheeting. In trenches that contain sandy soil or water, there is a tendency for sheeting to become loose and a few additional turns of the screw handle secure again a firm bracing.

Screws are steel and fittings malleable iron.

Can be unscrewed and used over and over. Adapted to any width of trench by substituting a different size tubing or pipe for that furnished and drilling a hole at one end for the insertion of a cotter pin.

No.	Dimensions, Inches: Pipe and Screw Diam.	Length: Screw A	Length: Brace Closed B	Length: Brace Open	Length: Pipe C	Safe Extension of Screw	Weight Pounds per Dozen	Price per Dozen
1	1½	10	16	22	8½	6	190	**$46.00**
2	1½	12	18	25	10½	7	198	**46.00**
3	1½	14	21	30	13½	9	215	**48.00**
4	1½	14	24	33	16½	9	224	**48.00**
5	1½	16	27	37	19½	10	240	**52.00**
6	1½	16	30	40	22½	10	246	**52.00**
7	1½	18	36	47	28½	11	270	**54.00**
8	1½	18	42	53	34½	11	285	**56.00**
9	1½	18	48	58	40½	10	300	**58.00**
10	2	18	36	46	26	10	517	**102.00**
11	2	18	42	52	32	10	538	**104.00**
12	2	18	48	58	38	10	560	**106.00**
13	2	18	54	64	44	10	590	**108.00**
14	2	18	60	70	50	10	604	**110.00**

Simplex Trench Brace Fittings



Simplex Trench Brace Fittings are furnished to contractors who wish to put on pipe to suit conditions. The addition of a piece of standard gas pipe, cut to the required length, with a small hole drilled in one end to receive a cotter pin, completes the brace.

The cotter pin may be removed and shorter or longer pipe substituted, to make the brace suit any width of trench desired.

In close quarters, where the regular lever nut cannot be used to advantage, a special lever nut with 3 holes to fit a 1-inch rod can be furnished at no extra charge.

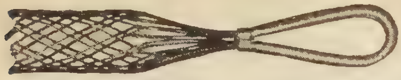
Screw is steel and fittings malleable iron.

No pipe is furnished.

No.	Diameter Screw Inches	Length Screw A Inches	Safe Extension of Screw Inches	Weight Pounds per Dozen	Price, per Dozen: Complete	Price, per Dozen: Screw Ends Only
15	1½	10	6	165	**$40.00**	**$30.00**
16	1½	12	7	175	**40.00**	**30.00**
17	1½	14	9	180	**42.00**	**32.00**
18	1½	16	10	190	**44.00**	**34.00**
19	1½	18	11	196	**46.00**	**36.00**
20	2	18	10	415	**90.00**	**66.00**

Reliable Single Eye Cable Grips

Hard Wire

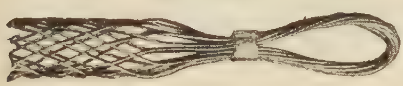


Duplex hard tough wire grip for attaching pulling line to the end of a cable. Resists wear in rough, sandy conduits. Large sizes used on aerial cable.

Cat. No.	Size Inches	For Cable Diam. Inches	Cat. No.	Size Inches	For Cable Diam. Inches
802	¾x22	¾ to ⅞	**812**	¾x30	¾ to ⅞
803	1 x22	1 to 1⅜	**813**	1 x30	1 to 1⅜
804	1½x22	1½ to 1⅞	**814**	1½x30	1½ to 1⅞
805	2 x22	2 to 2⅜	**815**	2 x30	2 to 2⅜
806	2½x30	2½ to 2⅞	**816**	2½x45	2½ to 2⅞
807	3 x30	2 to 3⅜	**817**	3 x45	3 to 3⅜
808	3½x30	3½ to 3⅞	**818**	3½x45	3½ to 3⅞

Reliable Single Eye Cable Grips

Soft Wire

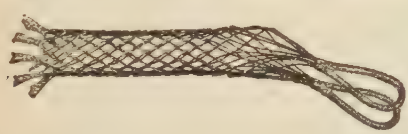


Soft wire grips with soft eyes for attaching pulling line to end of cable.

Soft eye slips easily through aerial rings.

Cat. No.	Size Inches	For Cable Diam. Inches	Cat. No.	Size Inches	For Cable Diam. Inches
822	¾x24	¾ to ⅞	**832**	¾x36	¾ to ⅞
823	1 x24	1 to 1⅜	**833**	1 x36	1 to 1⅜
824	1½x24	1½ to 1⅞	**834**	1½x36	1½ to 1⅞
825	2 x24	2 to 2⅜	**835**	2 x36	2 to 2⅜
826	2½x24	2½ to 2⅞	**836**	2½x36	2½ to 2⅞

Reliable Double Eye Luffing Cable Grips



Used for pulling slack or removing old cable. Shortest body permits longest pull in cramped manhole. Pull is evenly distributed on all wires giving long life.

Cat. No.	Size Inches	For Cable Diam. Inches	Cat. No.	Size Inches	For Cable Diam. Inches
842	¾x18	¾ to ⅞	**852**	¾x24	¾ to ⅞
843	1 x18	1 to 1⅜	**853**	1 x24	1 to 1⅜
844	1½x18	1½ to 1⅞	**854**	1½x24	1½ to 1⅞
845	2 x18	2 to 2⅜	**855**	2 x24	2 to 2⅜
846	2½x18	2½ to 2⅞	**856**	2½x24	2½ to 2⅞
847	3 x18	3 to 3⅜	**857**	3 x24	3 to 3⅜
848	3½x18	3½ to 3⅞	**858**	3½x24	3½ to 3⅞

Reliable Double Eye Split Cable Grips

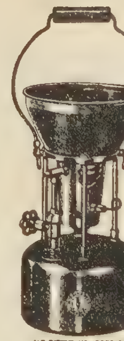
Used for pulling slack in working cables. Can be attached and removed without cutting cables. Strong hooks which are easily fastened and unfastened eliminate trouble of lacing grip with rawhide. Designed so that less than half as many hooking operations are necessary to connect the two sides of grips as if a conventional hooking scheme were used.

Cat. No.	Size Inches	For Cable Diam. Inches	Cat. No.	Size Inches	For Cable Diam. Inches
862	¾x18	¾ to ⅞	**872**	¾x24	¾ to ⅞
863	1 x18	1 to 1⅜	**873**	1 x24	1 to 1⅜
864	1½x18	1½ to 1⅞	**874**	1½x24	1½ to 1⅞
865	2 x18	2 to 2⅜	**875**	2 x24	2 to 2⅜
866	2½x18	2½ to 2⅞	**876**	2½x24	2½ to 2⅞
867	3 x18	3 to 3⅜	**877**	3 x24	3 to 3⅜
868	3½x18	3½ to 3⅞	**878**	3½x24	3½ to 3⅞

Klein's Furnaces

1-Gallon Capacity

Burns Gasoline or Kerosene



U.S. PATENT NO 1307213

Sturdy construction made especially for field use.

Quick starting is ensured by multi-coil burner which is economical and vaporizes the fuel thoroughly, producing an intensely hot fire. Simple cleaning device to remove carbon deposit without taking burner apart.

Weight, 12½ pounds.

No. 3010 Windshield, extra, is shipped with furnace unless otherwise ordered.

No. **3529**, Pump Built in......each **$33.50**

Shields for Klein Furnaces

Made of heavy gauge sheet steel. Top edge is rolled and bottom is reinforced with a heavy ring.

All joints welded.

Weight, 3 pounds.

For furnace No. 3529.

No. **3010**....................each **$4.00**

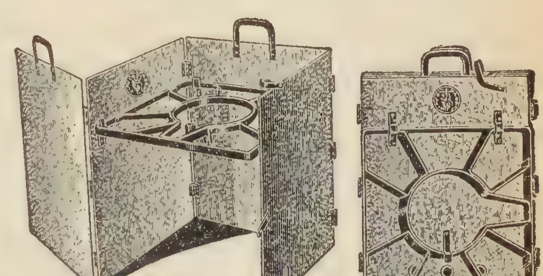
No. 3000 Pumps for Klein Furnaces and Torches

Has brass barrel and plunger.

Weight, ½ pounds.

No. **3000**......................................each **$2.50**

Klein's Folding Windshields



Made of heavy galvanized sheet steel in four leaves each 24 inches high and 18 inches wide hinged together. Hinges are securely riveted. Grate made of 3/16x¾ inch steel, welded and swings on one leaf of the shield.

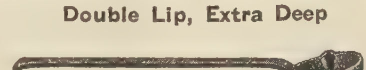
Grate designed so that it can be used with melting pot or the larger sizes of wax kettles.

Weight each, 40 pounds.

No. **3020**, With Welded Grate..................each **$25.00**

Wrought Steel Melting Ladles

Double Lip, Extra Deep



No...............	**10**	**20**	**30**	**40**	**60**	**80**
Size.........inches	2½	3	3½	4	5	6
Price.........each	**$1.00**	**1.20**	**1.40**	**1.60**	**2.10**	**2.40**

B & L Star Brand Pulling-In Frames

The pulling-in frame is constructed to help install cable in underground ducts.

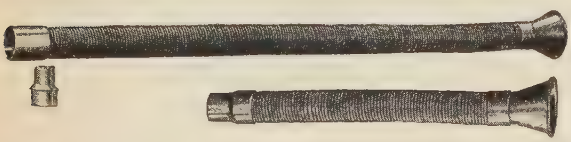
The sheave support consists of two 13-foot sections of 6-inch steel channels, fastened together at each end by two sections of 4-inch steel channels. Each 13-foot section is provided with 24 holes on 6-inch centers in order to allow the two sheaves to be adjusted to the proper position on the sheave support for any cable installation.

Two sheaves are used with each sheave support, one large aluminum sheave and a small steel sheave which have diameters of 20 inches and 5¾ inches respectively. The diameter and groove of the large sheave are of sufficient size to allow a cable to be pulled over it, without harming the cable sheath, when this procedure is necessary to obtain sufficient cable in the manhole for splicing. An important feature is that each sheave is provided with a Metaline bushing which makes the use of a lubricant unnecessary.

Approximate weight, 260 pounds.

Prices and further information upon application.

B & L Star Brand Cable Feeders



Designed to protect and guide underground cables into ducts particularly in congested manholes.

Feeder consists of a 7-foot and a 3-foot length of 4-inch galvanized flexible metal hose which may be joined to make an uninterrupted length. Standard feeder will fit 3¼-inch ducts.

A nozzle extension is provided to reduce the opening sufficiently to enter the end of smaller ducts. Special nozzles can be furnished for various size ducts. Extra 3-foot lengths of hose may be obtained for increasing the length of the cable feeder for use in large or deep manholes.

Approximate weight, 100 pounds.

Cable Sheave and Shackle

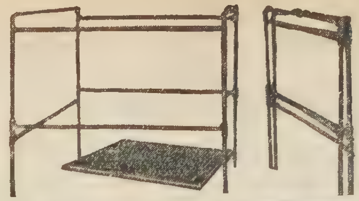
The cable sheave and shackle may be used in place of the pulling-in frame when it is possible or advisable to locate the rear of the truck directly over the manhole. The device is attached to the manhole pulling iron and the winch line goes over a roller or sheave at the rear of the truck then down and under the cable sheave and shackle and thus into the duct. The sheave is made of special aluminum alloy for light weight, 20 inches in diameter, with a groove large enough to take a 3½-inch cable. The hook is drop-forged.

Approximate weight, 51 pounds.

Prices and further information upon application.

GraybaR QUALITY SINCE 1869
Distributed and guaranteed by
GraybaR ELECTRIC COMPANY

Manhole Guards



Open, 50x50x42 in.; closed, 3½x50x42 in.

Ship. wt., 43 lbs.

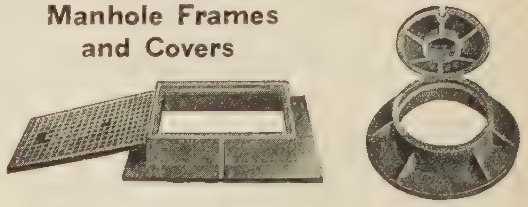
Price, Manhole Guards. . each **$25.00**

Manhole Skids and Sheaves

Price, 9-foot. . . . . . . .per set **$60.00**

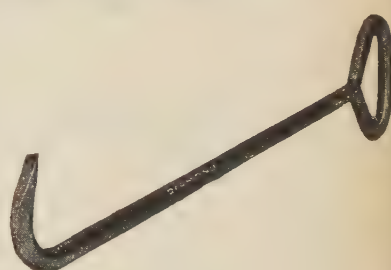
Extra lengths, $3.00 per foot.

Manhole Frames and Covers



Cat. No.	Size, Inches Opening	Size, Inches Flange	Ht. In.	Wt., Lbs. Each	Price Each
Square					
229	17x22	31x36	6	340	**$25.00**
271	18x30	26x38	5	375	**26.00**
278	28x32	38x42	7¼	620	**49.00**
Round					
202	23	36	9	540	**$30.50**
204	23	36	9	450	**29.00**
206	23	36	9	400	**27.50**
208	23	35	7	350	**24.00**
211	23	36	6	315	**22.50**
212	22	30	5¼	265	**20.00**

Diamond Manhole Cover Hooks



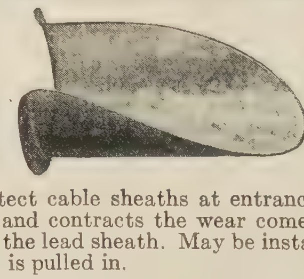
This is a useful tool for the subway construction force. It is designed to easily raise a heavy manhole cover by prying the wedged point end of the hook under the groove provided in the cover for the purpose.

The hook is made of an excellent quality of electric tool steel suitably hardened at and adjacent to the hook to prevent its bending, and at the same time sufficiently tough to prevent breaking off.

Price. . . . . .each **$1.50**

Hubbard Cable Duct Shields

Zinc and Hot Galvanized Steel



Used to protect cable sheaths at entrance of ducts. As cable expands and contracts the wear comes on the shield rather than on the lead sheath. May be installed, if desired, after the cable is pulled in.

Cat. No.	Per 100	Material	Size, Inches Diam.	Size, Inches Length	Std. Pkg.	Wt., Lbs. per 100
9140	**$19.20**	20-Ga. Sheet Steel. . .	3	6	100	61
9141	**19.20**	18-Ga. Zinc.	3	6	100	58
9142	**29.50**	12-Ga. Sheet Steel. . .	2⅝	9	50	170

Hubbard Manhole Ladders

Hot Galvanized

The 6½, 8, 10 and 12-foot lengths have sides of 1½x9/16x3/16-inch channel and rungs of 5/8-inch round open hearth steel. The 14-foot ladder is made of channel 2½x5/8x3/16-inch sides. The rungs pass through the sides and are riveted over on the outside. They are 12 inches apart spaced from the bottom rung which is placed 12 inches from the bottom of the ladder.

Standard package, 5.

Cat. No.	Length Feet	No. of Rungs	Rung Spacing Inches	Width Inside Inches	Ship. Wt., Lbs. Each	Price per 100
9111	6½	6	12	12	24½	**$419.60**
9112	8	7	12	12	30	**516.30**
9113	10	9	12	12	38	**645.20**
9115	12	11	12	12	46	**774.00**
9117	14	13	12	12	53	**903.30**

Hubbard Pulling-In Irons for Manholes

Hot Galvanized

Pulling-in irons are set into the concrete or brick walls of street vaults opposite all duct entrances to provide a convenient and strong attachment for the pulling-in blocks for installing or removing cables. They are made of 7/8-inch steel in accordance with the A. T. & T. Company's specifications, and are so designed as to straddle the brick.

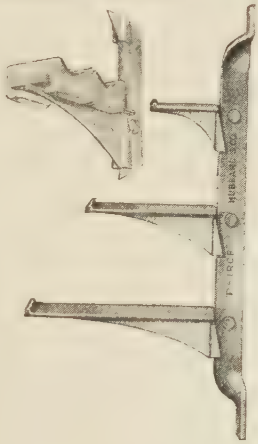
Cat. No.	Size Steel Inches	Extension from Wall Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
9119	7/8	9	5	500	**$83.30**
9120	7/8	12	5	600	**96.60**

Hubbard Locktype Cable Racks

Hot Galvanized

Racks are made of 1¾x3/8-inch flat steel, with 7/8x9/16-inch mounting holes, in lengths to accommodate 1 to 4 of the hooks listed.

The certified malleable iron hooks have rack attachment lugs and overlaps which prevent wobbly fits and insure minimum movement. High grade dry process grooved porcelain insulators with smooth glazed surfaces lock to the hooks.



Racks

Cat. No.	Per 100	No. of Holes	Dimensions, In. Hook Hole Spacing	Dimensions, In. Length Over All	Dimensions, In. Bolt Hole Spacing	Ship. Wt., Lbs. per 100
2281	**$66.60**	1	.	14¾	13	225
2282	**91.60**	2	7	21¾	20	350
2283	**108.30**	3	7	28¾	27	475
2284	**133.20**	4	7	35¾	34	575

Hooks

Cat. No.	Per 100	Dimensions, In. Extension	Dimensions, In. Width	Ship. Wt., Lbs. per 100
2254	**$56.70**	4¼	2	135
2258	**71.60**	8¼	2	210
2262	**101.60**	12¼	2	270

Insulators

Cat. No.	Per 100	Radius for Cable Inches	Size Inches	Ship. Wt., Lbs. per 100
2122	**$18.30**	1½	3x3	95
2123	**30.00**	2¼	3x4	125

Hubbard Presteel Cable Racks

Hot Galvanized

For manhole and interior cable work.

The rack sections are made in three lengths which can be combined into almost any desired length.

These sections are made from 1½x9/16x3/16-inch open hearth steel channel, with ample strength to support the heaviest cables. They should be fastened to manhole walls with ½x4-inch Peirce Expansion Bolts.

Rack Sections

Cat. No.	No. of Holes	Hole Spacing	Dimensions, Inches Length Over All	Dimensions, Inches Bolt Hole Spacing	Wt., Lbs. per 100	Price per 100
2124	8	1½	15	13⅝	150	**$26.40**
2125	14	1½	24	22½	260	**47.00**
2126	18	1½	30	28½	310	**55.40**

Hooks

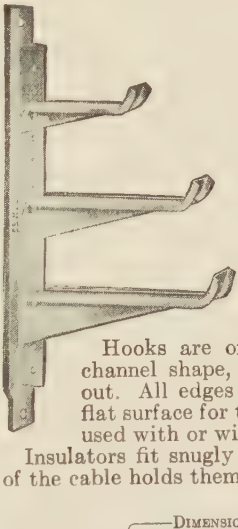
Cat. No.	Dimensions, Inches Extensions From Face of Rack	Dimensions, Inches Thickness of Plate	Wt., Lbs. per 100	Price per 100
2131	4	1½x1 1/16x3/16	55	**$21.70**
2132	7½	1½x1 1/16x3/16	107	**30.90**
2133	10	1½x1 1/16x3/16	130	**37.80**

No. 2120 Hubbard Cable Rack Insulators

Standard Type

These insulators, used on Hubbard cable rack hooks, provide a smooth, well rounded surface which permits cable creepage without injury to lead sheaths. Also provide insulation between cable and rack. Width, 2¾ inches. Std. pkg., 50. Weight per 100, 100 pounds.
Price, No. **2120**, for 1½-Inch Cable..........per 100 **$19.80**

Hubbard Underground Cable Racks, Hooks and Insulators



For Heavy Cable Work

Hot Galvanized

Rack section is 2¼x2¼x¼-inch steel T section, offset at lower end for overlapping when combining two racks. Any desired length of cable racks can be made in this manner. Racks have 11/16-inch mounting hole at top and bottom and are fastened to new manhole walls with No. 2246 anchor bolt which is cemented into the wall. ½x4-inch Peirce expansion bolts are used for attaching to manholes not provided with anchor bolts.

Hooks are one-piece 3/16-inch steel pressed to a channel shape, insuring uniform strength throughout. All edges are rounded and there is a smooth flat surface for the cable to rest upon. Hooks can be used with or without an insulator.

Insulators fit snugly on the cable hooks and the weight of the cable holds them in place.

Racks

Cat. No.	No. Holes	Dimensions, Inches Hook Hole Spacing	Dimensions, Inches Length Over All	Dimensions, Inches Bolt Hole Spacing	Std. Pkg.	Wt., Lbs. per 100	Price per 100
2225	14	1½	27½	25½	5	780	**$100.00**
2246	Anchor Bolt–5/8x6-Inch..				250	74	**10.80**

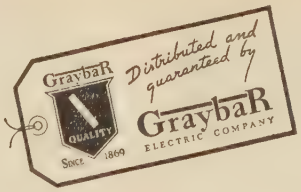
Hooks

Cat. No.	Dimensions, Inches Extension	Dimensions, Inches Width	Std. Pkg.	Wt., Lbs. per 100	Price per 100
2231	5	2½	150	178	**$56.70**
2232	9½	2½	33	337	**71.70**
2233	14	2½	45	502	**101.70**

Insulators

Cat. No.	Radius for Cable, Inches	Width Inches	Std. Pkg.	Wt., Lbs. per 100	Price per 100
2121	2⅝	3¾	50	110	**$21.70**

GENERAL ELECTRIC PRODUCTS



General Electric Street Lighting Equipment, Transformers, Watthour Meters, Motors and Control for standard installations are listed on the following pages. Lamps and other General Electric material are listed in other sections of this catalog. Space would not permit listing any but standard items, but full information will be furnished on any special items upon application to one of Graybar's 73 houses.

ARRESTERS: Lighting

BALANCER SETS

BRAKES: Electric

CAPACITORS

CIRCUIT BREAKERS: Air—Dead Front, Reverse Current, Underload. Oil—For Motor Service, Pole Mounted

CLOCKS: Contact Making

COMPENSATORS: Automatic for Synchronous Motors CR-7061, Hand for Synchronous Motors CR-1135

CONTACTORS: A.C. and D.C.—CR 4002 and CR 7002

CONTROLLERS: Crane and Hoist, Dial Type, Drum Type, Fire Pump, Remote Indicating Speed, Wound Rotor Motors

CONVERTERS: Frequency, Synchronous

COUPLINGS

CUTOUTS: Primary

DEMAND METERS

ELECTRIC FOUNTAINS

FUSES: D & W

FUSE BOXES FOR CONTROLLERS CR-2901

GENERATORS: A.C. and D.C., Belted, Direct Connection

HEATING: Industrial, Devices, Cartridge Units Cast-In Hot Plates, Immersion Heaters, Metal-Melting Pots, Sheath-Wire Heating Units

INSTRUMENTS: Demand Indicators, Frequency Meters, Ground Detection, Microammeters, Milliammeters, Millivoltmeters, R.V.A. Meters

LAMPS: Mazda

LIGHTING: Street (Novalux)

MOTORS: A.C.—Built In, Explosion Proof, Multispeed, Phonograph, Slip Ring, Totally Enclosed; D.C.—Adjustable Speed, Enclosed, Ventilated, Protected; Gear—Fractional Horsepower, Special Purpose

MOTOR: Generator Sets—Battery Charging, Booster, Projector

REACTORS

RECTIFIERS: Copper Oxide

RECTIFIERS: Tungar & Bulbs

RELAYS

RESISTORS FOR D.C. AND WOUND ROTOR Motors

RHEOSTATS: Field, Speed Regulating

SELSYN DEVICES

SIGNALS: Traffic

STARTERS: Drum Type CR-3900, Definite Time, Dust Tight, For Slip Ring Motors CR-1028, For Synchronous Motors, Resistor Type CR-1042, Reversing

SWITCHES: Dial Type, Emergency Throw-over, Jack Type Disconnecting, Knife, Limit, Master, Motor Circuit, Motor Speed Changing, Overload Protective, Primary, Short Circuiting

THERMOSTATS

VALVES: Electrically Operated

WIRE: Deltabeston

American Concrete Lighting Standards

American Concrete Lighting Standards are manufactured by the centrifugally-spun process.

Curing

Spun-crete standards are cured for 28 days by a steam process.

During curing the most favorable conditions are obtained by maintaining the correct temperature in the curing room and regulating the amounts of water taken up by the product.

Careful curing insures the ultimate in strength, wear-resistance, bond-strength, and water-tightness.

When emergency shipment of less than 30 days is required, Spun-crete standards of equal strength may be obtained in 7 days by the use of a high early strength cement at an increased cost.

Core

When desired, a 2-inch galvanized pipe core may be obtained in the finished standard at a nominal increase in cost.

Finish and Aggregate

Flat surfaced standards are water-polished giving a glossy smooth surface showing the beauty of the granite aggregate.

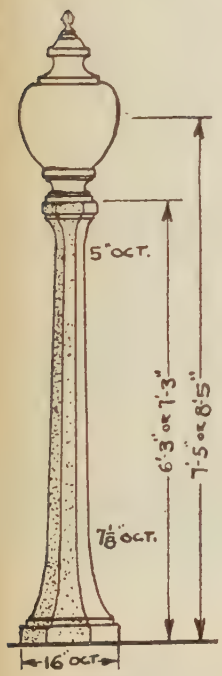
Standards having round, fluted or irregular surfaces can not be water-polished but are acid-etched.

Flat surfaced standards may also be acid-etched at no increased cost.

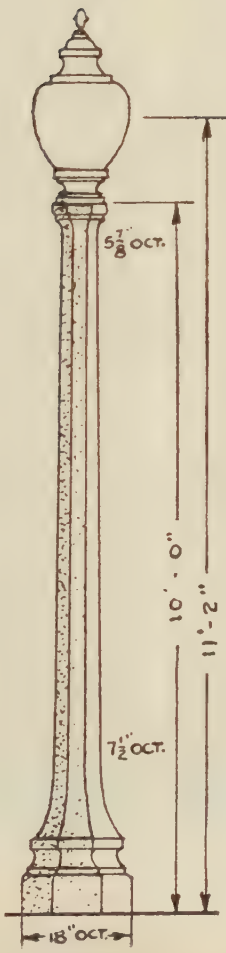
Spun-crete standards are furnished in black and white aggregate as standard.

Red and white aggregate can be furnished at no increase cost upon request.

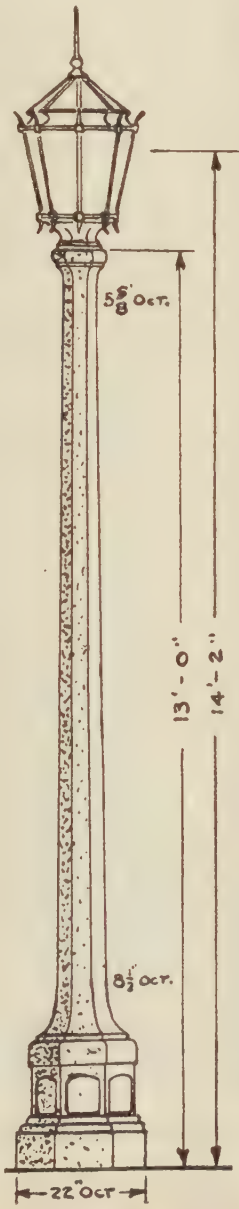
Green and white aggregate can be furnished at a slightly increased cost.



Conowingo
A-530-6'-3"
A-531-7'-3"

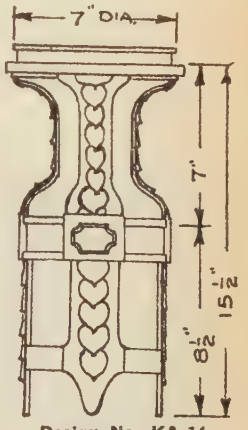


New Urban
A-509-A

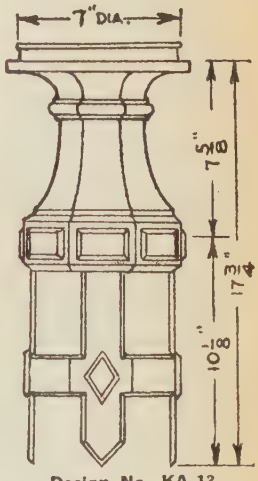


Boulevard Transformer
A-504-TR

[City Beautiful
A-503



Design No. KA-14
Folium Casing



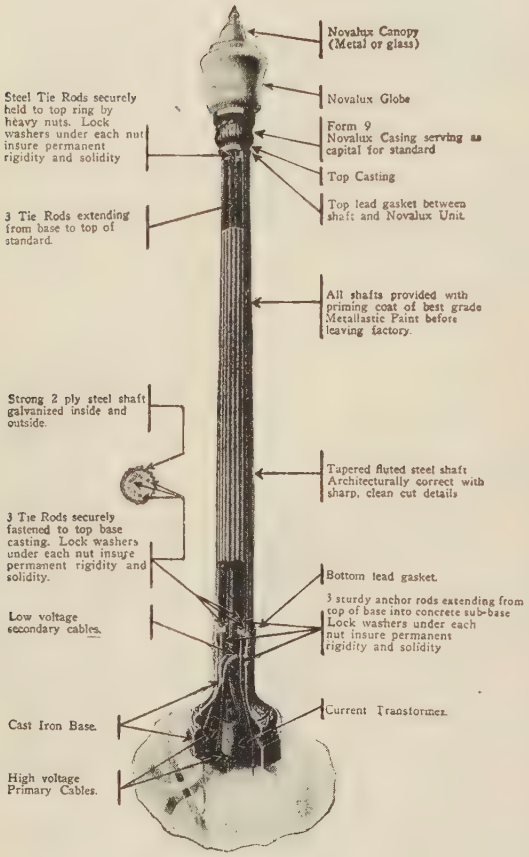
Design No. KA-13
Folium Casing

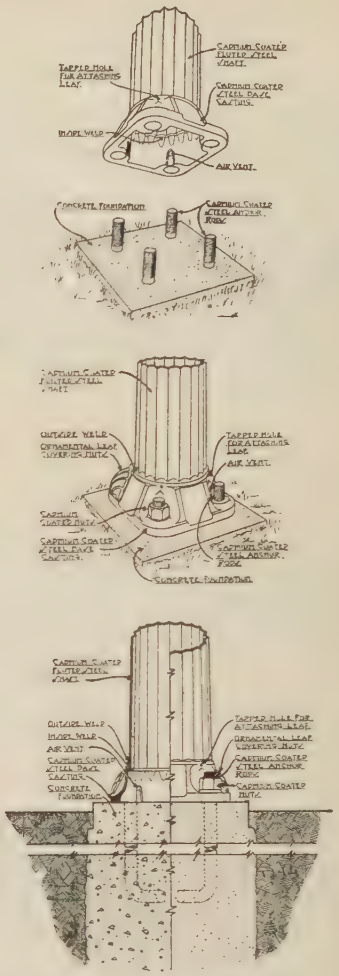
Above folium casings will fit octagonal poles with top shaft diameter 5¼ to 6 inches.

When these are used the concrete capital is omitted.

Complete Information and Prices Furnished on Receipt of Specifications

Union Metal Steel Lighting Standards





Sectional View of Union Metal Fluted Steel Pole Showing Method of Anchorage for Heavy Gauge Shaft Construction

Light Weight Shaft Construction

Union Metal lamp standards are built like a modern skyscraper. Three sturdy anchor rods extend from the top of the ornamental base into the concrete sub-base and securely anchor the lower section of the standard to the ground.

Likewise every standard is provided with three steel tie rods, passing from the base through the shaft and into the topmost part of the capital or head.

The scientific tripod or steel truss construction coupled with the pressed metal shaft provides the important engineering requirements of great strength, light weight, and low center gravity. In case of severe impact they will bend but will not break and fall heavily to the ground.

Standards are made with shafts of two or three thicknesses of No. 22 U. S. gauge copper bearing steel. Double lock-seams. Plies pressed firmly together with no solder or rivets. Seams rolled on the inside so that both inside and outside of pole are smooth. Galvanized with lead and zinc spelter both inside and out. Painted inside and out with best grade of metallastic paint.

Shafts available with outer lamination of 16 ounce cold rolled sheet copper, fluted and pressed into place at an increased cost.

Available in natural copper, verd-antique, oxidized copper or statuary bronze finish. Standards available with bronze castings at an increased cost.

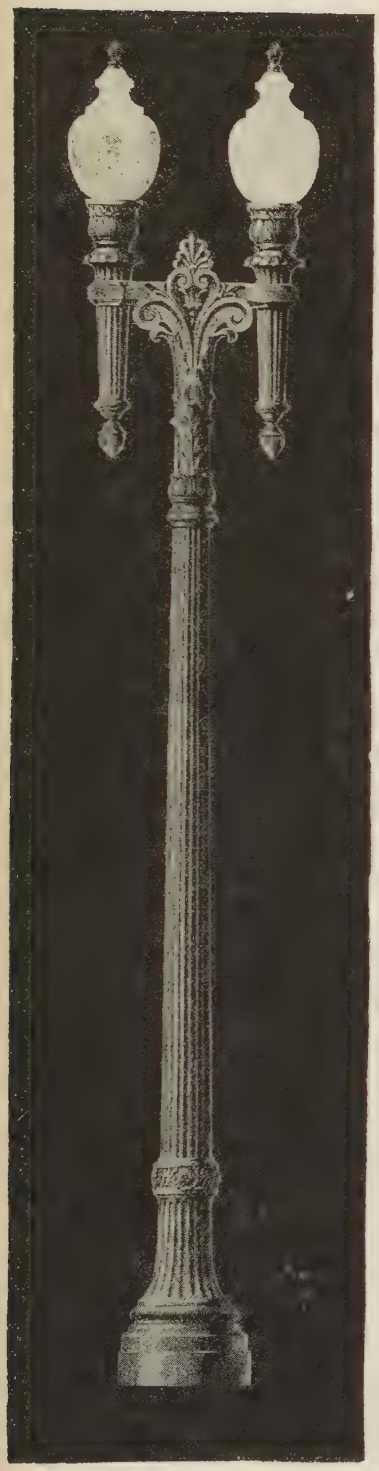
Anchor rods, galvanized steel, vary from $\frac{5}{8}$ inch to $1\frac{1}{4}$ inches depending upon size of standard. Tie rods vary from $\frac{1}{2}$ to $\frac{5}{8}$ inch depending upon size of standard. Lock washers are used to prevent loosening of nuts due to service vibration.

Heavy Gauge Shaft Construction

Union Metal steel standards are also furnished employing heavy gauge steel shafts, fabricated from highest grade open hearth steel.

The thickness depends upon the strength requirements. A heavy cast steel base of special analysis is attached to the lower end of the shaft with a double electric weld.

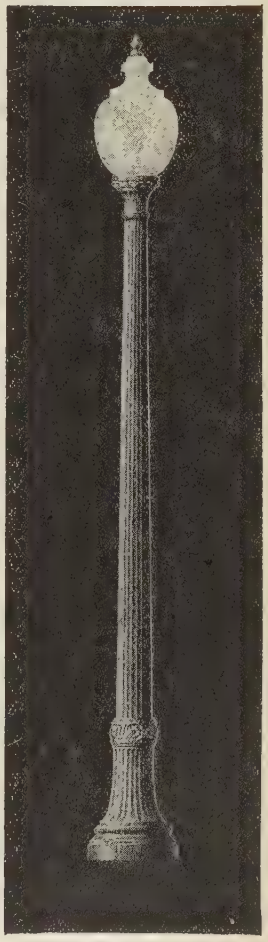
Union Metal Steel Lighting Standards
Columbian Design



Design No. 9014

Design No. 2515

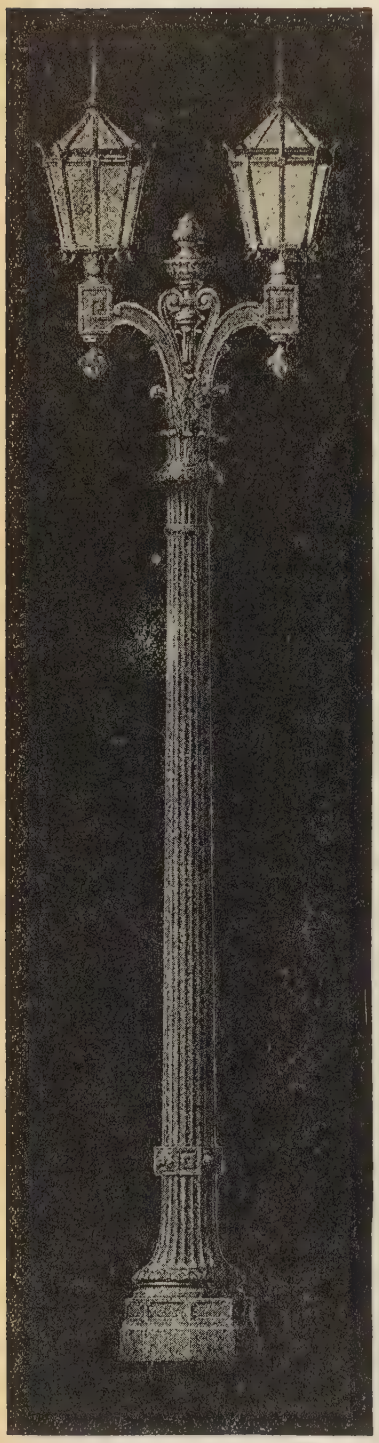
Design No. 807



Design No. 1571

Bulletins Giving Complete Information Gladly Furnished on Application

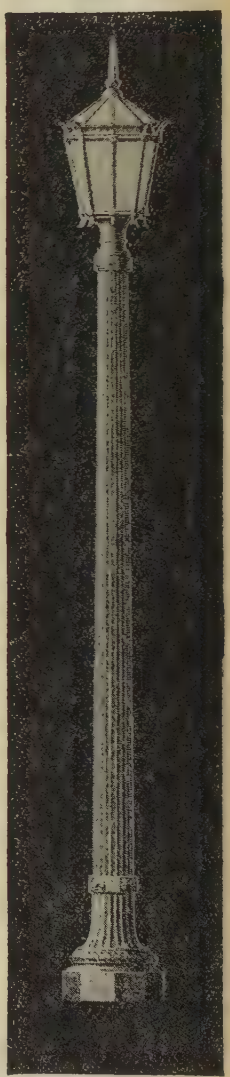
Union Metal Steel Lighting Standards
Metropolitan Design



Design No. 1193

Design No. 8182

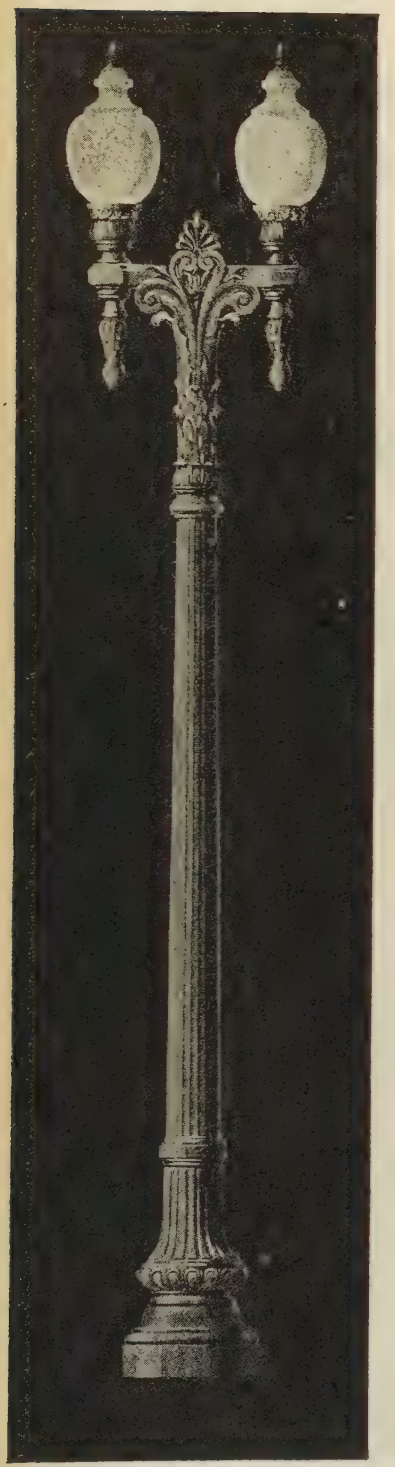
Design No. 1195



Design No. 1194

Bulletins Giving Complete Information Gladly Furnished on Application

Union Metal Steel Lighting Standards
National Design



Design No. 9027

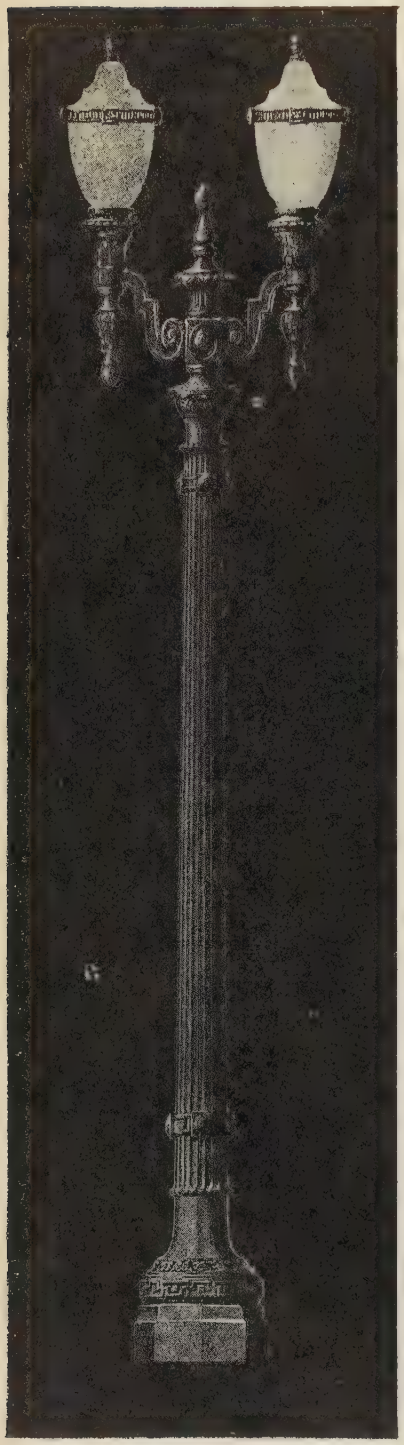
Design No. 1926

Design No. 1925

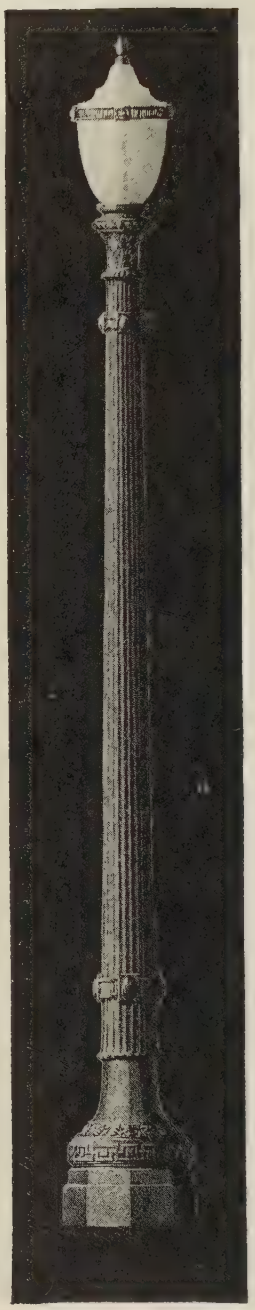
Design No. 874

Bulletins Giving Complete Information Gladly Furnished on Application

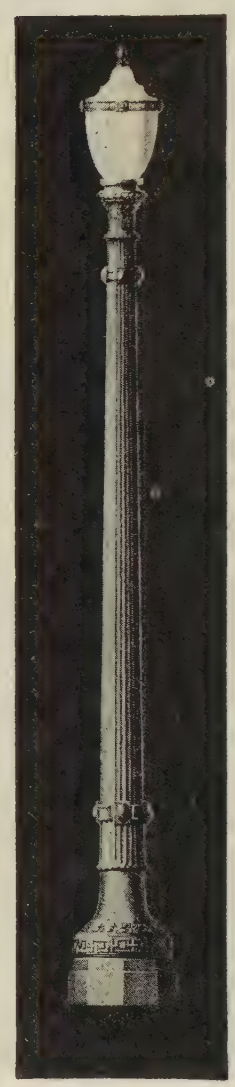
Union Metal Steel Lighting Standards
Pacific Design



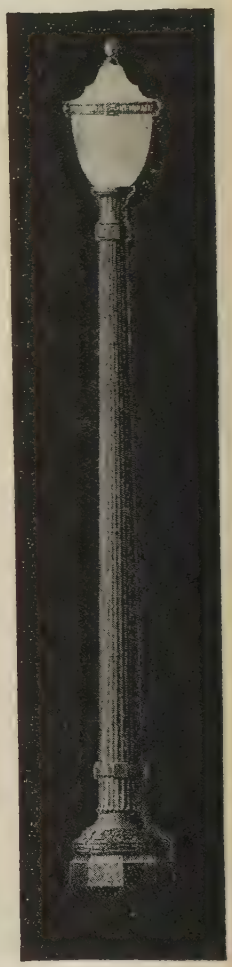
Design No. 1747



Design No. 1775



Design No. 3534



Design No. 2000

Bulletins Giving Complete Information Gladly Furnished on Application

Union Metal Steel Lighting Standards
Empire Design

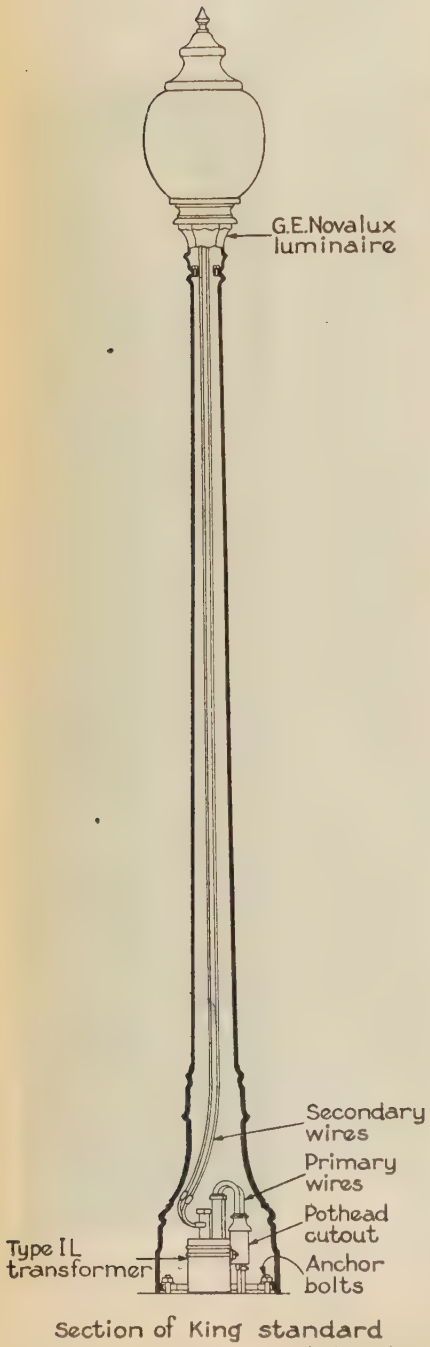
Design No. 1655

Design No. 792

Design No. 2216

Bulletins Giving Complete Information Gladly Furnished on Application

King Ferronite Cast Iron Lighting Standards



Section of King standard

Designs available in groups of similar designs to meet all requirements in one locality.

Construction

Made from aluminum patterns in iron flasks.

Ferronite is a special composition of greater strength than ordinary cast iron.

Ferronite insures all delicate details of design to be smooth, clean cut, deep and perfect. The inside of standards is as smooth as the outside which prevents damage to cable insulation.

Wall thickness of standards is uniform and weight is distributed uniformly which increases strength of standards.

Standards are given a shop priming coat of special hard skin paint. Final finish is to be put on by customer after installation.

Door in base of standard permits ready access for anchoring, making electrical connections, installing transformers, testing and inspecting.

Safety Spiders

Used to prevent and limit the fall of standard on violent impact.

Recommended on heavily traveled thoroughfares.

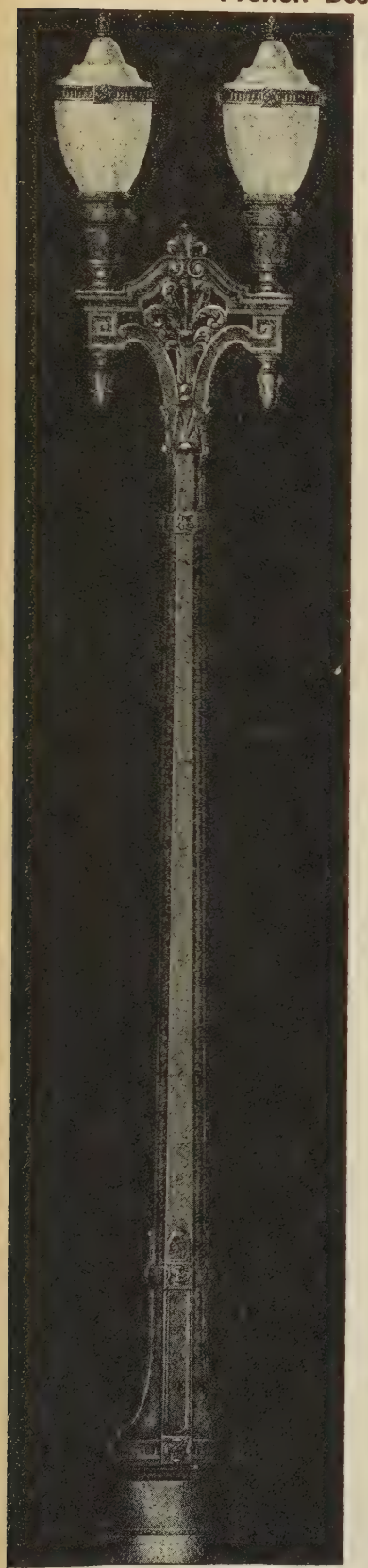
Provided at increased cost on special order only, where not listed.

Pipe reinforcement furnished on some designs.

Safety spider available to permit use of transformers in base of standard.

King Ferronite Cast Iron Lighting Standards

French Design



Design Nos. K-64, K-137, K-0392

Design Nos. K-61, K-62, K-63, K-122, K-132, K-164, K-1575

Flemish Design

Design Nos. K-46, K-1840, K-1841

Design Nos. K-44, K-45, K-106, K-107, K-142, K-149, K-1515

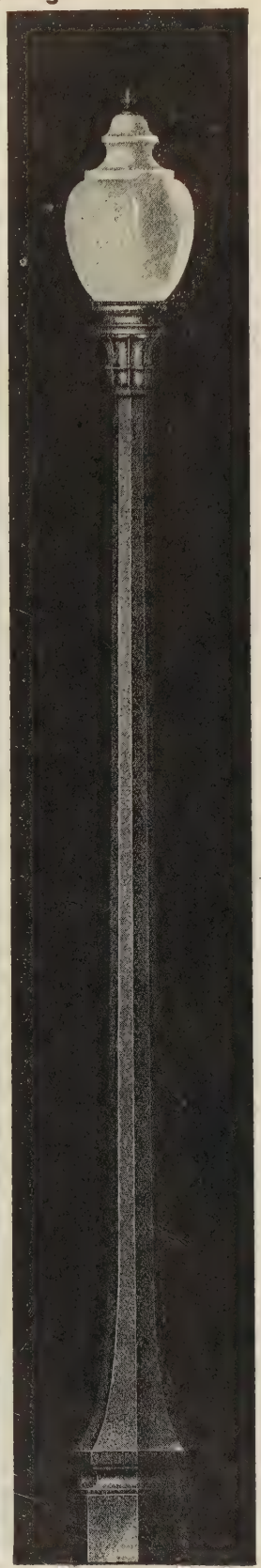
Bulletins Giving Complete Information Gladly Furnished on Application

King Ferronite Cast Iron Lighting Standards

Community Design

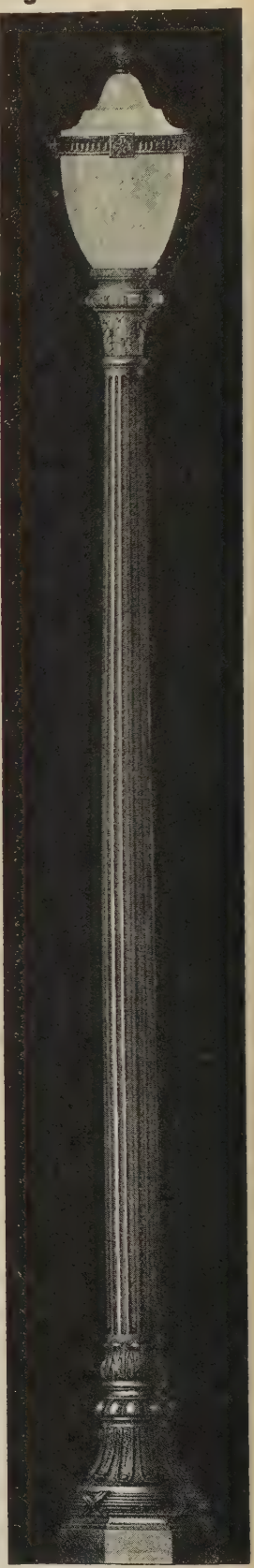
Georgian Design

Design Nos. K-129, K-1842



Design Nos. K-16, K-17, K-77, K-79, K-1559

Design No. K-87



Design Nos. K-85, K-86

Bulletins Giving Complete Information Gladly Furnished on Application

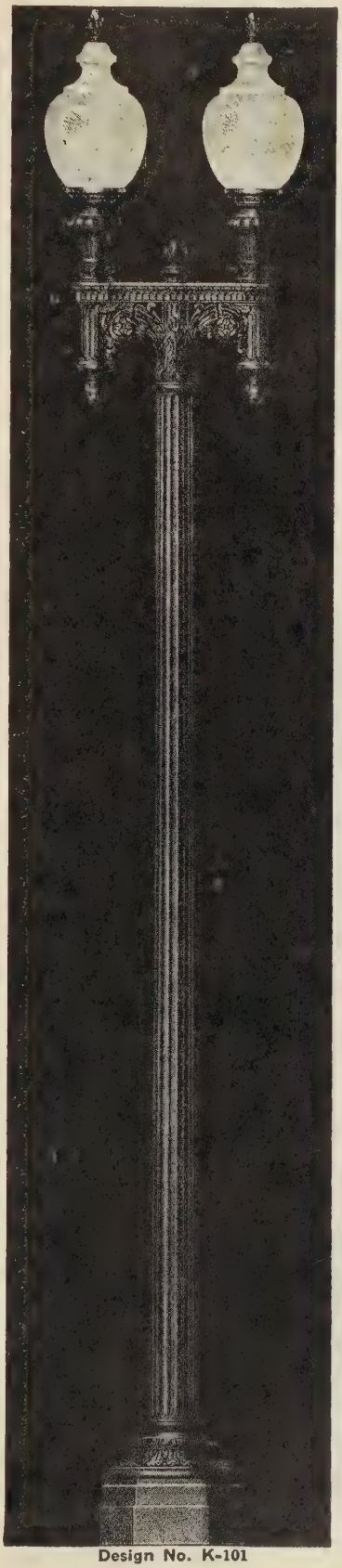
King Ferronite Cast Iron Lighting Standards

Doric Design

Design No. K-70

Design Nos. K-73, K-145, K-168, K-1666

Washington Design



Design No. K-101

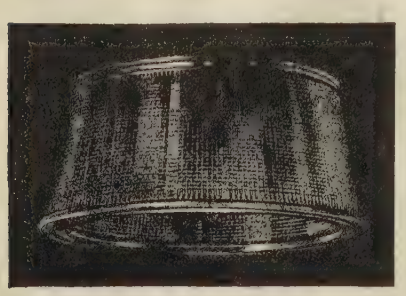
Design No. K-103

Bulletins Giving Complete Information Gladly Furnished on Application

G-E Holophane Refractors

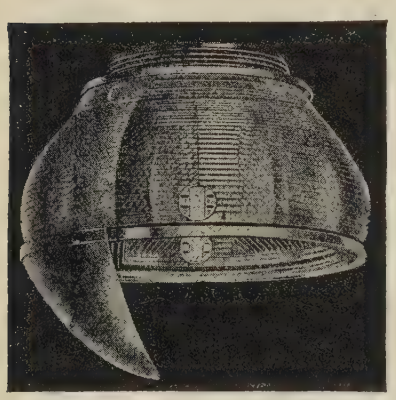
These refractors conserve the light in the upper hemisphere, which for some classes of lighting is not required, and redirects it to the street where it will be useful.

Band Refractors



For use where a totally enclosed unit is not desired.

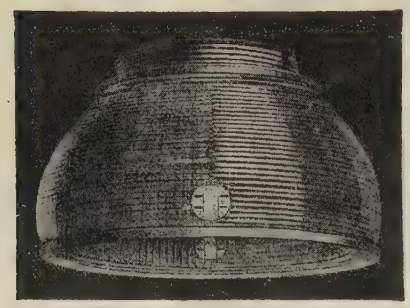
Sym-etric Dome Refractors



Dome Refractor with Light Shield on House Side

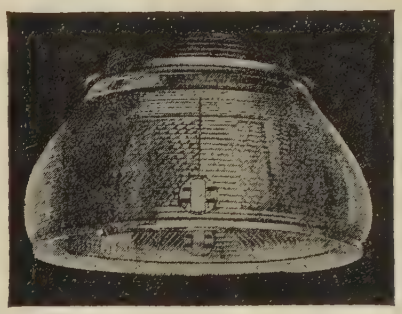
For use within an enclosing globe. Light shields for attaching to all types of dome refractors are available. These shields reduce the light on the house side.

A-Sym-etric Dome Refractors



Designed for units mounted at the side of the street. An A-Sym-etric Dome Refractor reduces the light on the house side which is an advantage in residential districts.

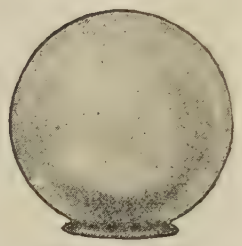
G-E B-Sym-etric Holophone Dome Refractors



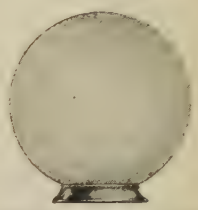
Conserves the light in the upper hemisphere, which for some classes of lighting is not required, and redirects it to the street where it will be useful.

For units mounted at the side of the street. Reduces the light on the house side, which is an advantage in residential districts.

Street-Lighting Ball Globes



With Plain Collar



With Spun Aluminum Protector

Snow-white is a pure white diffusing glass. It does not show any lamp filament nor bright spot on the globe surface. Inlite is a fine semi-translucent glass and very white for this character of glass.

Inland C. R. I. (crystal roughed inside) is a clear glass sand-blasted inside. Inland ruby and green are solid and true colored.

Furnished in snow-white, C. R. I., Inlite and with plain collar spun aluminum protector as illustrated.

Cat. No.	Size In.	Snow White Each	Ruby and Green Each	For Drilling One Hole	Std. Pkg.	Pkg. Wt. Lbs.
2436	4 x10	$1.54	$3.08	$.16	4	19
2438	5 x10	1.54	3.08	.16	4	19
2440	6 x10	1.54	3.08	.16	4	19
2442	7 x10	1.54	3.08	.16	4	19
2448	5 x12	2.32	4.62	.26	1	8
2450	6 x12	2.32	4.62	.26	1	8
2452	7 x12	2.32	4.62	.26	1	8
2454	8 x12	2.32	4.62	.26	1	8
2464	6 x14	3.52	7.04	.26	1	11
2468	7 x14	3.52	7.04	.26	1	11
2470	8 x14	3.52	7.04	.26	1	11
2474	6 x16	4.96	9.90	.34	1	12
2476	7 x16	4.96	9.90	.34	1	12
2478	8 x16	4.96	9.90	.34	1	12
2480	9 x16	4.96	9.90	.34	1	12
2482	6 x18	8.80	17.60	.50	1	14
2486	8 x18	8.80	17.60	.50	1	14
2492	8⅛x20	15.40	30.80	1.00	1	16

An additional charge of 30 cents per globe is made when equipped with spun aluminum protector ring.

G-E Form 8 Novalux Ornamental Luminaires

Cross-Section of Globe and Canopy Showing Internal Canopy and Refractor Holder

Recommended for whiteway lighting for towns and villages and ornamental lighting on boulevards, parkways, residential streets and less important business streets of larger cities.

This luminaire has been designed particularly for use with 1000 to 6000-lumen, 6.6-ampere series or 200 to 500-watt multiple Mazda C lamps. Since the Form 8 casing will not contain an auto-transformer, high-current series lamps in 4000, 6000 and 10000-lumen sizes operated at currents of 15 or 20 amperes can be used in this unit only in connection with a Type IL transformer in the base of the standard.

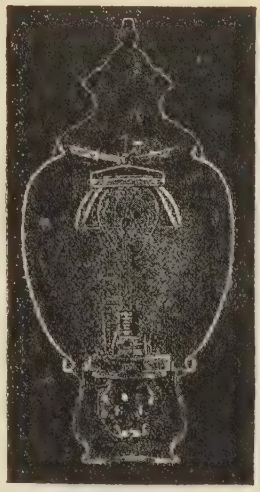
Casing is of cast iron and has two cast lugs to support a porcelain receptacle or supports for a multiple socket. Globe seat is embodied in casing and drip holes are drilled in globe seat to drain off rain water. Two types of casings can be furnished having the same external appearance and differing only in method of attachment to pole. Type F and 3 casings rest upon top of pole and are bolted in place; K and 2-K casings slip over shaft and are fastened by set screws.

Internal canopy holder for glass canopy is fastened to upper lip of globe by set screws. Canopy holder has a swinging arm which projects through hole in glass canopy and is threaded on end for combined pinnacle and weather shield.

Design of casing is architecturally constructed for use with fluted poles. Internal canopy holder with swinging arm holds canopy securely to globe and acts as a support for canopy during cleaning.

Alabaster rippled glassware diffuses light and has high transmission characteristics.

G-E Form 9 Novalux Ornamental Luminaires



Cross-Section of Complete Luminaire Showing Auto-Transformer and Internal Parts

Recommended for whiteway lighting, main boulevards and secondary business streets.

Straight series, straight multiple, or high-current series lamps can be used with this fixture. The high-current lamps can be operated from Type IL transformers or auto-transformers. The 6000, 10000 or 15000-lumen lamps are recommended for best results.

The standard dome or A-Symetric dome refractors can also be used with rippled glassware.

The luminaire consists of a cast iron casing, a porcelain receptacle which acts as a support for the series socket, a globe, and canopy. The casing is designed to accommodate an auto-transformer which, when used, is mounted on the under side of porcelain insulating plate. The globe seats in a groove on the top of the casing and is held firmly in place by three clips. The casing is fastened to the pole by three screws.

The architectural design of the casing enables it to be used on fluted poles.

On account of the short casing, this makes a good luminaire for bracket mounting.

The internal canopy holders with swinging arms hold the canopy securely to the globe and act as a support for the canopy during cleaning.

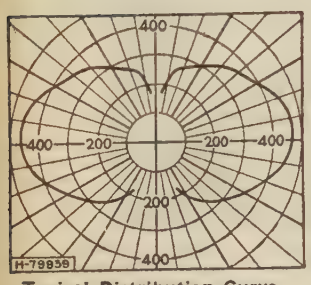
With No. 127 Globe, No. 1127 Glassware

With No. 109 Globe, No. 1109 Glassware

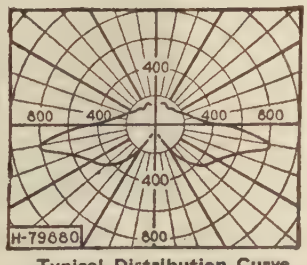
With No. 123 Globe, No. 1123 Glassware External Straps

With No. 107 Alabaster Rippled Globe, No. 1107 Rippled Canopy

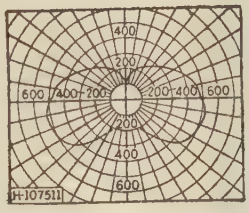
With No. 118 Alabaster Rippled Globe, No. 1118 Alabaster Rippled Canopy



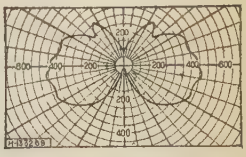
Typical Distribution Curve of Luminaire with Rippled Glass Globe and Canopy, and 6000-Lumen Lamp



Typical Distribution Curve of Luminaire with Rippled Glass Globe and Canopy, Dome Refractor and 6000-Lumen Lamp



Typical Distribution Curve of Luminaire with Rippled Glass Globe and Rippled Glass Canopy with 6000-Lumen Lamp



Typical Distribution Curve of Luminaire with 8-Panel Globe and 6000-Lumen Lamp

G-E Form 12 Novalux Ornamental Luminaires

With No. 118 Alabaster Rippled Globe, No. 1118 Alabaster Rippled Glass Canopy, Form N Casing

With No. 123 Alabaster Rippled Globe, No. 1123 Alabaster Rippled Canopy and External Straps

With No. 123 Alabaster Rippled Globe, No. 1123 Alabaster Rippled Glass Canopy Form O Casing

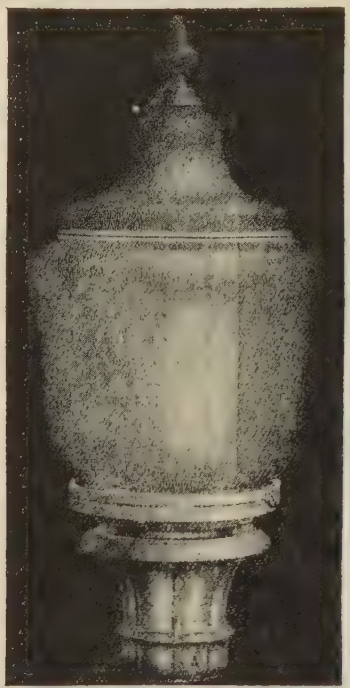
Designed for use with 4000 and 6000-lumen, 6.6-ampere series; 4000, 6000, 10000, 15000 and 25000-lumen high-current lamps or 300 to 2000-watt multiple Mazda C lamps. High-current series lamps, except 25000-lumen size, can be operated from self-contained auto-transformers or Type IL transformers.

The 1500 or 2000-watt and 25000-lumen sizes can be only used with 126 globe and 1126 canopy.

Cast iron casing, standard with green paint finish, has been designed for a slender pole having a 5-inch top diameter. For the No. 103 and 123 globe, a 7″ adapter is used, forming the O casing. For No. 104 and 124 globe, an 8″ adapter is used, forming the M casing. For No. 118 globe, a 10″ adapter is used forming the N casing. For 126 globe an 11″ adapter is used.

Canopies for Nos. 103, 104, 123, 124 and 126 globes are held by an internal support which fastens to casing.

G-E Novalux Ornamental Luminaires



Form 13—With No. 109 Alabaster Rippled Globe and No. 1109 Alabaster Rippled Canopy

Made for use on octagonal poles with 4-inch top. The 2500, 4000, 6000 or 10000-lumen series and 300 or 500-watt multiple Mazda C lamps can be used in this fixture.

Form 16—With No. 118 Alabaster Rippled Globe and No. 1118 Alabaster Rippled Glass Canopy

A replica of the Form 13 luminaire on a larger scale. For use with 6000 to 10000-lumen, 6.6-ampere series; 6000 to 15000-lumen, 20-ampere series; 300 to 1000-watt multiple Mazda C lamps.

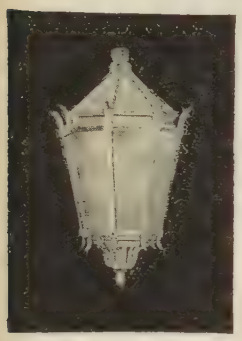
G-E Form 18 Novalux Ornamental Lantern Luminaires

The Form 18 Novalux lanterns are available in two sizes which meet every requirement of ornamental street lighting besides being useful for the ornamental lighting of certain types of buildings.

The Form 18A small size is for use with 300 and 500-watt, 2500, 4000 and 6000-lumen, 6.6-ampere series or 4000, 6000 and 10000-lumen high-current series lamps.

The Form 18B large size is made for use with 300, 500, 750 and 1000-watt, 4000 or 6000-lumen, 6.6-ampere series or 4000, 6000, 10000 and 15000-lumen high-current series lamps. These high-current series lamps can be operated from Type IL transformers in the small lantern and auto-transformers or Type IL transformers in the larger lantern.

G-E Form 19 Novalux Ornamental Lantern Luminaires



Designed for suspension from ornamental bracket arms. Useful for parkways, boulevards and residential streets.

Form 19A small size is used with a 300 or 500-watt Mazda C lamp.

Form 19B large size is used with a 750 or 1000-watt Mazda C lamp.

Made of grey cast iron. The different members are held together with brass screws, nuts and lock washers, thus eliminating any chance of corrosion of tapped holes and screws.

Bottom is a grid casting which carries a flat octagonal glass panel to provide light directly underneath unit.

G-E Form 27 Novalux Ornamental Luminaires

Cross-Section of Globe and Canopy Showing Internal Canopy and Refractor Holder

Form 27 luminaire is ideal for whiteway lighting in small towns or villages or for the minor business streets of larger cities.

For use with 1000 to 6000 lumen 6.6-ampere series, or 200 to 1000-watt multiple Mazda C lamp and, since the slender design of the casing does not permit the use of an auto-transformer, a Type IL series transformer is mounted in the base of the standard.

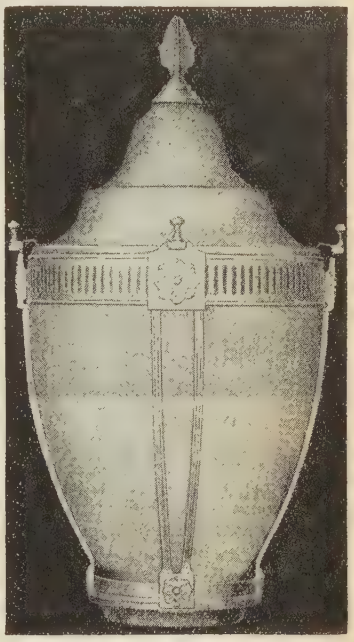
Holophane Sym-etric dome, A-Sym-etric and B-Sym-etric dome refractors redirect a portion of the upward light to the street surface. They can be used with Form 27 luminaires and are often desirable along boulevards and parkways where the amount of upward light is of less importance.

Consists of a cast iron casing, a porcelain receptacle which acts as a support for the series socket, a globe and canopy. Casing slips over shaft of pole and is held by three set screws. Globe seats in a groove on top of casing and is held firmly in place by four clamps. Canopy is held to globe by an internal canopy holder with three lugs which set over lip of globe and which is held fast by three screws that go under inside of upper globe fitter.

G-E Form 33 Novalux Luminaires

Suitable for Use with Concrete Standards

With No. 109 Globe and No. 1109 Canopy



With No. 124 Globe and No. 1124 Canopy with Ornamental Side Arms

For ornamental lighting on boulevards, parkways, residential streets and less important business streets of the larger cities.

Small Lantern Luminaire

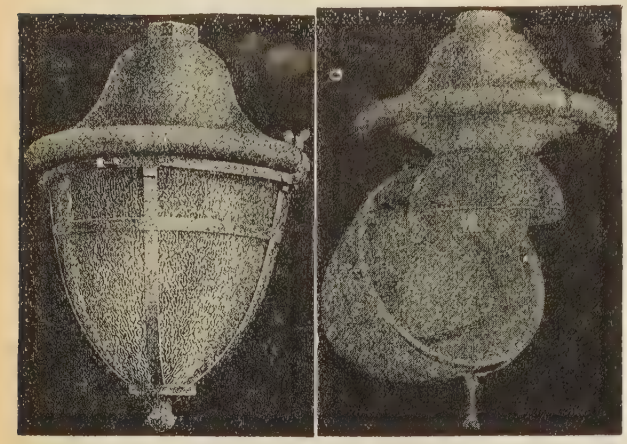
For use with Mazda C lamps, 1000 to 6000-lumen, 6.6-ampere series lamps, or 200 to 500-watt multiple lamps. Casing will not contain an auto-transformer, therefore, high-current series Mazda lamps in 4000, 6000, 10000 and 15000-lumen sizes, operated at currents of 15 or 20 amperes, can be used in this unit only in connection with a Type IL transformer in the base of the metal standard, or in concrete vaults for use with concrete standards.

The Sym-etric, A-Sym-etric or B-Sym-etric dome refractors can be used with rippled glassware.

Casing consists of a globe fitter and a pole adapter.

For all but the Nos. 1123 and 1124 canopies, the internal canopy holder for the glass canopy is fastened to the upper lip of the globe by set screws. Canopy holder has a swinging arm which projects through hole in glass canopy and is threaded on end for combined pinnacle and weather shield.

G-E Form 25 Novalux Suspension Luminaires



Form 25 Form 25 with Globe Open

Designed for residential districts where surroundings justify ornamental treatment, where wide streets require curb mounting rather than center suspension, where long spacing and high mounting are needed to economize in the number of units.

The construction of these units involves only a one-piece rippled glass globe supported by a basket formed of copper bands.

Top of luminaire is a single iron casting, painted green, which supports socket and porcelain enameled reflector and to which the copper basket is hinged. Reflector also serves as a holder for holophane dome refractor.

Top casting of luminaire is tapped to screw on end of a 1¼-inch pipe. Bracket consists of standard pole plates, pipes and scrolls used with street-system brackets.

Form 25-A

No. 116 light alabaster rippled globe, Sym-etric or A-Sym-etric dome refractor. Mounting height, 16 feet approximately. Spacing, 250 to 300 feet. Lamps—100, 150 or 200-watt multiple or 1000-lumen straight series.

Form 25-B

No. 108 light alabaster rippled globe, dome or A-Sym-etric dome refractor. Mounting height, 20 feet approximately. Spacing, 300 to 400 feet. Lamps—300 or 500-watt multiple or 4000, 5000 and 10000-lumen straight series or Type IL transformer types.

Form 25-C

An ornamental suspension fixture in which lamps up to 500-watt multiple and 15000-lumen series may be used. Applicable on boulevards, highways and any other place requiring a pendent unit with excellent appearance and high efficiency.

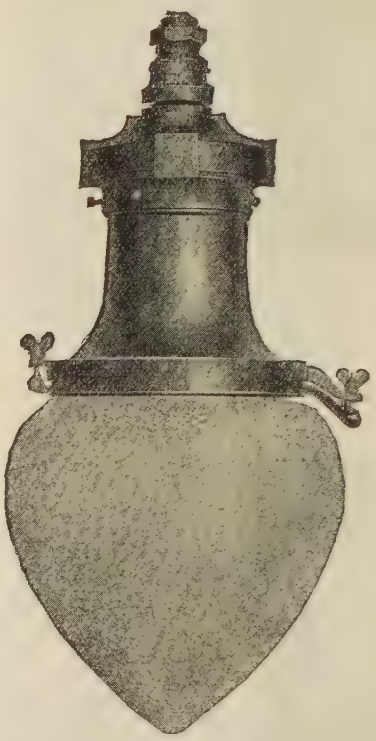
No. 193 alabaster rippled globe, Sym-etric, A-Sym-etric or B-Sym-etric dome refractor.

May be installed on 6.6-ampere series systems using lamps from 2500 to 15000 lumens. Since the 4000 to 15000-lumen lamps operate more efficiently on 15 and 20-ampere circuits, the use of Type IL transformers to provide higher current is recommended.

The efficiency of the luminaire is increased by the use of a steel internal reflector with reflecting surface of white porcelain enamel.

G-E Form 32 Novalux Suspension Luminaires

Bracket Suspension—Green Finish



With No. 146 Alabaster Rippled Globe

The Form 32 Novalux suspension luminaire is recommended for ornamental lighting, with lighting standards and with ornamental brackets for installation with underground wiring.

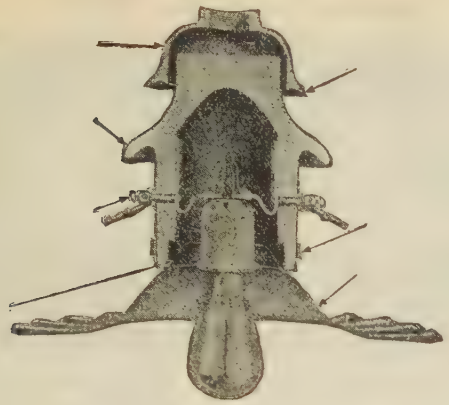
With different shapes of rippled globes, with and without dome refractors and with the various types of bowl refractors, this luminaire may be recommended for main thoroughfares, secondary business streets, residential streets and park roadways where high intensity illumination is required.

This luminaire is designed for use with Mazda C incandescent lamp. The straight series lamp of 2500, 4000 or 6000-lumen, 6.6-ampere rating and the multiple lamp of 300 or 500 watts are most commonly used with the glassware listed, except the No. 146 globe. The 6000, 10000 or 15000-lumen series and 750 or 1000-watt multiple lamps are best suited for use with the large No. 146 globe. The 15000-lumen, 15 or 20-ampere series or 750 and 1000-watt multiple lamps may be used with the No. 162 globe without refractors, or for 10000-lumen series, 300 or 500-watt multiple lamps with refractors. This globe is rectangular in shape and has been designed for use with a light shield to keep light on the house side from being objectionable to residential owners.

Since the 4000, 6000 and 10000-lumen lamps operate more efficiently on 15 or 20 amperes than on 6.6-ampere circuits, the use of an auto-transformer or Type IL transformer, for the purpose of stepping up the current, is recommended in these instances. Provision is made for mounting an auto-transformer within the casing of the luminaire. The IL transformer type of installation is particularly desirable because of its protection, which allows low-voltage wiring to the luminaire. When the Type IL transformer is used, it is usually mounted on the wood pole, in the base of the ornamental standard, or buried in the ground.

G-E Novalux Suspension Luminaires

For Use on All Series Circuits



Sectional View of Form 45-H with Sheet Metal Reflector

Suitable for installation in residential sections and on secondary business streets.

All parts are interchangeable. Changes in lamps and glassware accommodations are readily accomplished to meet all requirements that may develop in the community served.

A flexible and serviceable arrangement is provided for supporting sheet metal or cast iron reflectors with glassware to insulator without the use of adapters. Three heavy brass supporting and positioning screws, mounted in a bronze ring, impinge against a concentrically grooved copper collar on sheet metal reflector, or against conical depressions in lugs of cast iron reflector. This clamping arrangement forms a firm support for the reflector and acts as a protection for the insulator, as the possibility of radial stress on insulator is eliminated.

Reflector is made of high grade enameling steel and is finished in white fired vitreous enamel on the reflecting surface and green fired vitreous enamel on the outside surfaces. A concentrically grooved copper collar is provided, against which supporting screws impinge, relieving the enameled surface from undue strain.

An ornate cast iron reflector is available which can be furnished either with green paint, hot-dip galvanized, or green fire-enameled finish. The vitreous fire-enameled finish provides a lustrous surface of high efficiency, long life, low maintenance, and excellent appearance. This reflector also serves as a support for glassware by the addition of non-ferrous hinge and latch fittings.

Cast iron hood is tapped for a 1¼-inch pipe.

Overhanging skirt on wet-process porcelain insulator increases creepage distance and provides additional dry surface.

Binding post passes through tie lug, insulator and receptacle clip supports. Light centers are adjusted by changing supports on binding posts. Copper collar relieves enamel surface from undue strain.

Water dripping from overhang on cast iron hood strikes insulator just above skirt. This feature greatly increases wet flashover voltage.

Clamping ring with three set screws holds reflector without radial pressure on porcelain. Contour of sheet metal reflector greatly increases strength and prevents flexing and consequent chipping of enamel.

Form 45-H

Consists of a cast iron hood, wet-process porcelain insulator, series socket, sheet metal fire-enameled, radial-wave reflector, or a cast iron reflector with refractor holder and refractor, a globe holder and globe as required.

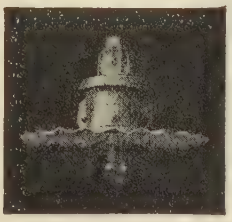
Main insulator is made of wet-process porcelain, finished in green glaze, provides high mechanical and di-electric strength, is non-hygroscopic and is equipped with non-ferrous contact parts and supporting elements.

Form 45-M

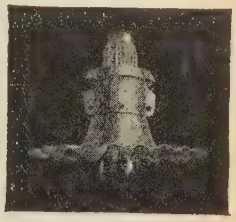
Form 45-M1 is similar to Form 45-H4 fixture with all the combinations of reflectors and glassware except that the insulator is of dry-process porcelain.

G-E Form 45-H4 Novalux Suspension Luminaires

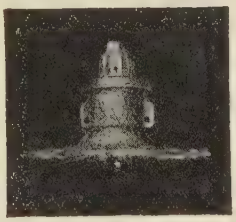
With Wet-Process Porcelain Insulator for Use on All Series Circuits



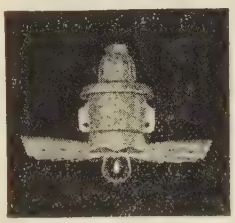
With 20-Inch Flat Radial-Wave Reflector



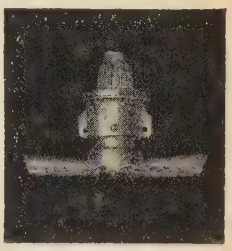
With 20-Inch Deep Dome Radial-Wave Reflector



With 18 or 20-Inch Dome Radial-Wave Reflector

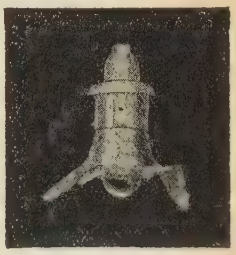


With 20-Inch Asy-Radial-Wave Reflector



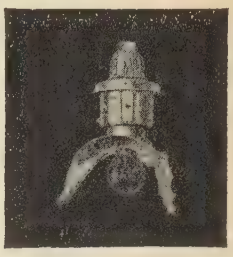
With 20-Inch Asy-Radial-Wave Reflector, Long Collar

With 20-Inch Dome Radial-Wave Shading Reflector



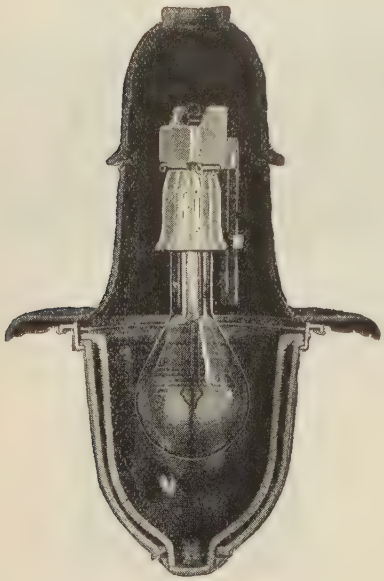
With 20-Inch Deep Dome Radial-Wave Shading Reflector

With 20-Inch Concentrating Asy-Radial-Wave Reflector



With 20-Inch Concentrating Asy-Radial-Wave Reflector, with Long Collar

G-E Form 45-L Novalux Suspension Luminaires



Sectional View

Recommended for installation in residential sections, on main thoroughfares and on secondary business streets or highways. Suitable for use on any overhead lighting circuit of less than 5000 volts; readily adapted for series, multiple or Type IL transformer distribution.

Consists of a cast iron hood, reflector, series or multiple socket, and refractor or enclosing globe.

Four cast iron hoods are provided, one with a straight 1¼-inch pipe tap, one with a right angle 1¼-inch pipe tap, and two similar hoods with bushings for external wiring. Hoods finished in green fire enamel, hot-dip galvanized or green paint.

The sheet metal, radial-wave reflectors are made of high grade enameling steel finished in white and green, fired, vitreous enamel.

Cast iron reflectors, both shallow and deep, can be furnished with fire enamel, hot-dip galvanized or painted finish.

On series circuits up to 5000 volts, a receptacle is furnished for necessary insulation and to receive series socket. When used with a hood and sheet metal or shallow, cast iron reflector, the receptacle is mounted in the hood on a small non-adjustable support and when used in the deep cast iron reflector, an adjustable support provides adjustment for 5⅜, 7 or 9½-inch light center lamps.

On multiple circuits, a medium screw base socket on an adjustable support is mounted in hood and used with sheet metal or shallow cast iron reflector, permitting operation of multiple lamps up to and including 200 watts. For 300 to 500-watt lamps a Mogul screw base socket is mounted on an adjustable support in deep cast iron reflector.

Bowl and band refractor holders consist of a cast aluminum ring, with rigid hinge and latch fittings. Nos. 166 and 176 globes have a holder similar to refractor holder and with all the advantages of a refractor holder. It is of sufficient diameter to allow the globe to swing by the dome refractor.

If a dome refractor is required, a holder is provided and may be attached to cast iron reflector by screws that hold hinge and latch fitting. With the new design of rigid hinge and snap-latch fittings, it is possible to relamp luminaire from ground with a lamp picker.

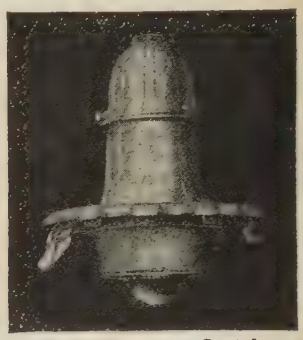
G-E Form 45-L Novalux Suspension Luminaires

For Series Circuits Under 5000 Volts

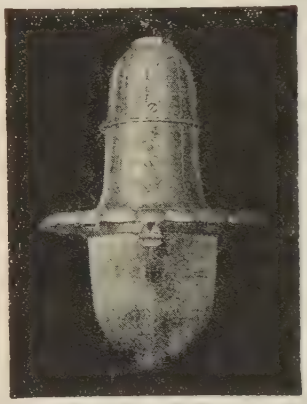
With 18 or 20-In. Dome Radial-Wave Reflector

With 20-Inch Deep Dome Radial-Wave Reflector

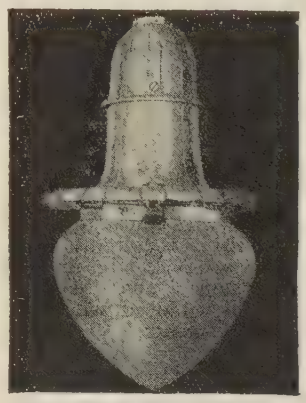
With 14-Inch Deep Cast Iron Reflector



With 14-In. Deep Cast Iron Reflector and 8-Inch Band Refractor



With 14-In. Deep Cast Iron Reflector and Sym-etric, B-Sym-etric or Hi-Way Bowl Refractor



With 14-Inch Deep Cast Iron Reflector and No. 166 Alabaster Globe

With 14-Inch Deep Cast Iron Reflector and No. 176 Alabaster Globe

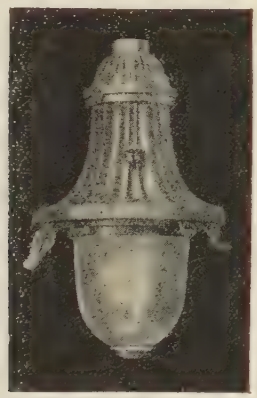
G-E Form 47 Novalux Eternalite Suspension Luminaires

For Use on All Series Circuits, Multiple or Type IL Transformer Circuits

For 300-Watt Multiple or 2500, 4000 or 6000-Lumen Series Lamps

Reflector Only

With 8-Inch Band Refractor



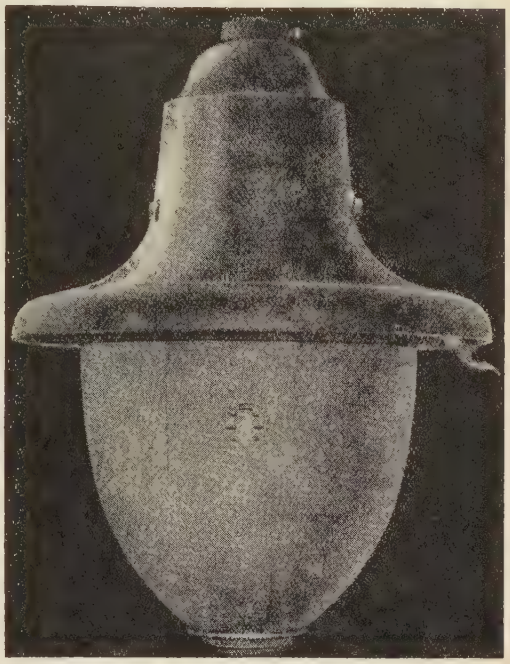
With Sym-etric, B-Sym-etric or Hi-Way Bowl Refractor

With No. 166 Alabaster Globe and Sym-etric, A-Sym-etric or B-Sym-etric Dome Refractor

With No. 176 Alabaster Globe and Sym-etric, A-Sym-etric or B-Sym-etric Dome Refractor

G-E Form 52 Novalux Suspension Luminaires

For Operation on Multiple and Series Circuits Up to 5000 Volts



Luminaire with 11-Inch Refractor

Designed particularly to utilize the increased efficiency obtained by using the new 11-inch refractor. This unit may be applied to good advantage on boulevards, main thoroughfares, highways and any other place where a pendent unit with excellent appearance and high efficiency is required.

May be installed on series systems using 2500, 4000 or 6000-lumen lamps for operation on 6.6-ampere circuit; since the 4000, 6000 and 10000-lumen lamps operate more efficiently on 15 and 20 amperes than on 6.6-ampere circuits, the use of IL type transformers for the purpose of stepping up the current is recommended in these instances. Lamps rated as high as 15000 lumens may be used in this unit on series circuits. On multiple-circuits, lamps rated as high as 500 watts may be used. The fact that these large size lamps are applicable in this unit puts it in step with the present trend of good lighting practice.

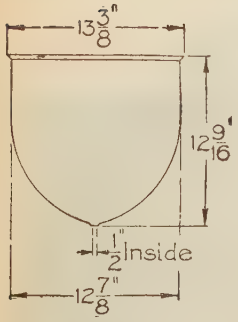
The hood or casing is a casting which may be furnished in cast iron, painted green or in galvanized or cast aluminum in natural finish or painted.

Hood is also equipped with an external adjusting mechanism which permits the adjustment of the lamp to the proper light center with respect to the refractor—a consideration that is essential for correct distribution. The new rigid hinge and latch refractor holder is incorporated in the design of this fixture. This holder insures an insect-tight fit for the refractor against the casing. It is also notched, which prevents the refractor from slipping out of position because of vibration or relamping. The new hinge and latch permits relamping from the ground with the assistance of a lamp replacer. The 11-inch refractor with peephole is an essential feature of this fixture. It is highly efficient and the peephole makes possible positive adjustment.

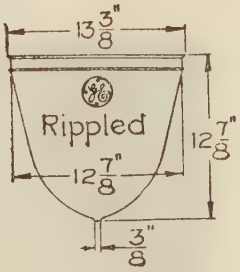
G-E Street Lighting Glassware

Outer Globes

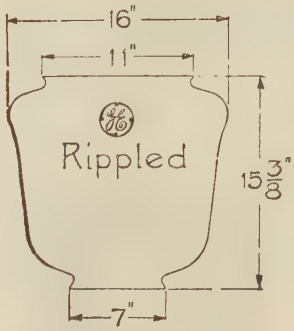
Dimensions



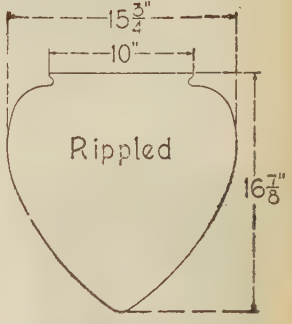
No. 14



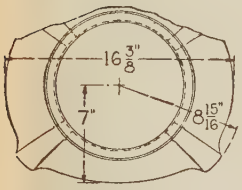
No. 108

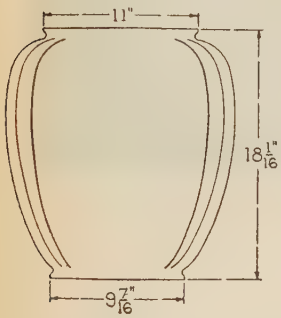


No. 135

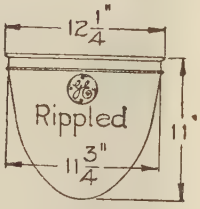


No. 146

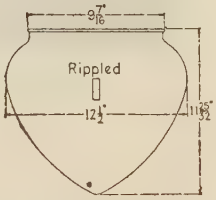




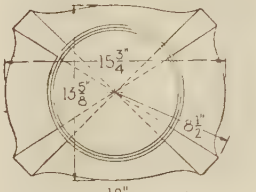
No. 161

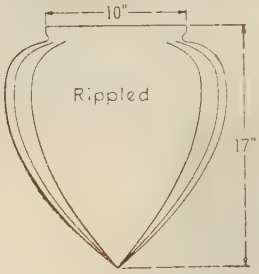


No. 116

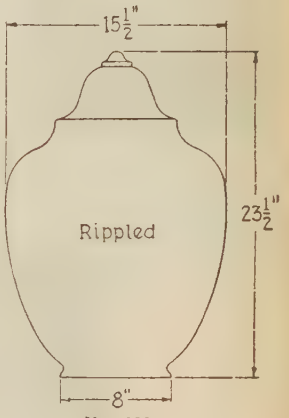


No. 166

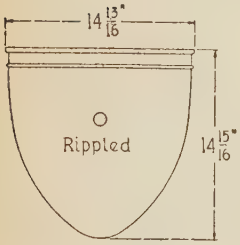




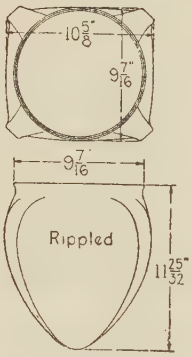
No. 162



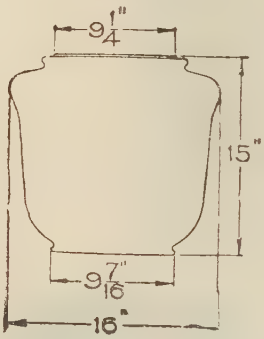
No. 199



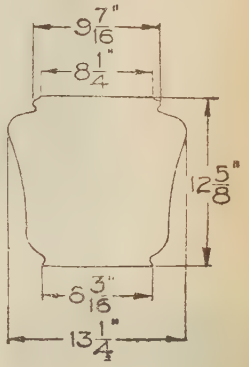
No. 193



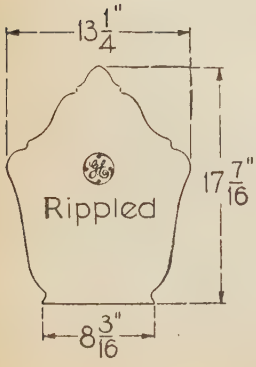
No. 176



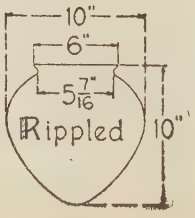
No. 37



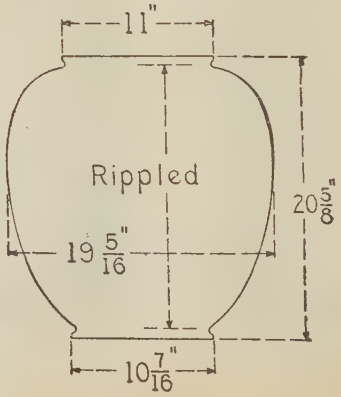
No. 39



No.154



No. 141

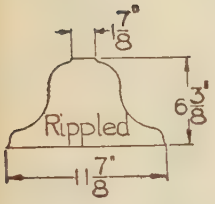


No. 126

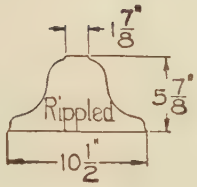
G-E Street Lighting Glassware

Outer Globes with Companion Canopies

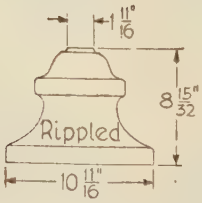
Dimensions



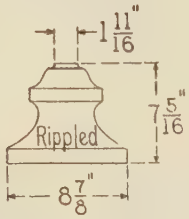
No. 1107
Patent Applied for



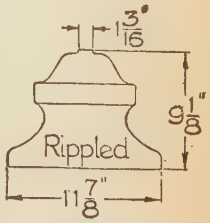
No. 1109
Patent Applied for



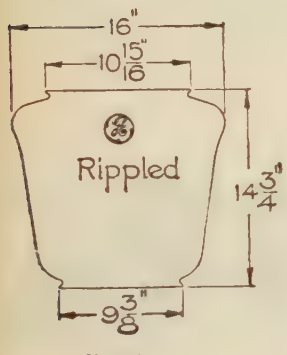
No. 1127



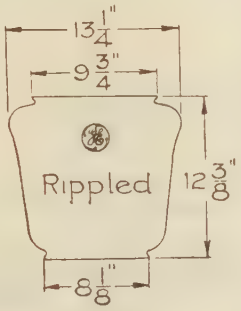
No. 1128
Patent Applied for



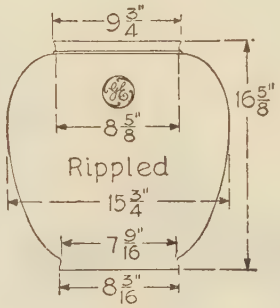
No. 1118
Patent Applied for



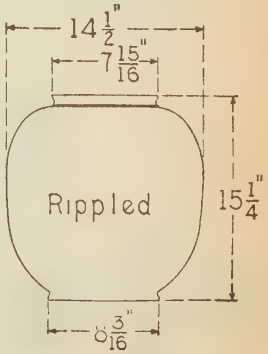
No. 107



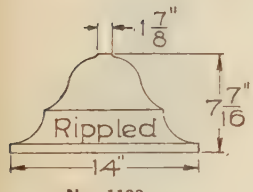
No. 109



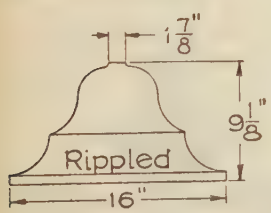
No. 127



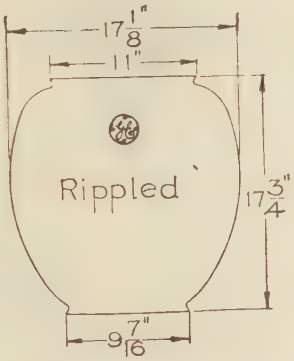
No. 128



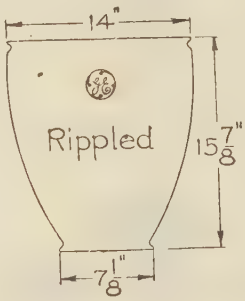
No. 1123
Design Patent 55165



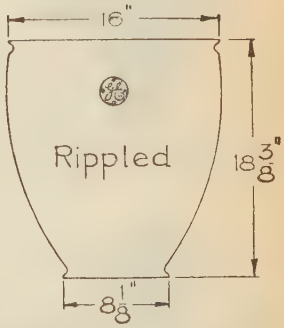
No. 1124
Design Patent 55165



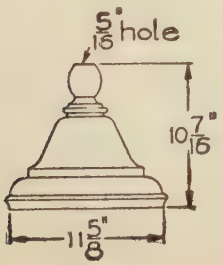
No. 118
Design Patent 50192



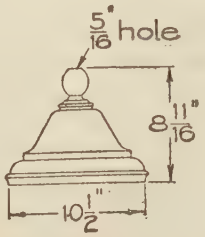
No. 123
Design Patent 57462



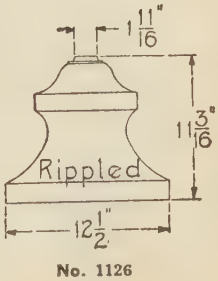
No. 124



No. 1037
Design Patent 55303



No. 1039
Design Patent 55303



No. 1126

G-E Novalux Brackets

For Novalux Suspension Luminaires

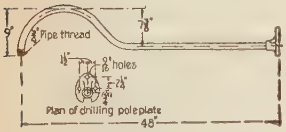
Pipe is steel and not conduit.

Angle of bracket with pole is adjustable on Bishop's Crook, right-angle-bend and straight pipe brackets.

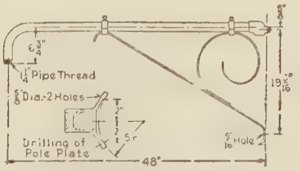
Pole plates are malleable iron.

The 1¼-inch brackets are available with either 2 or 3-hole pole plates.

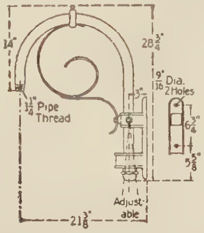
Scroll clamps and set screws are galvanized. On painted brackets, clamps are painted over galvanizing.



Goose-Neck Bracket



Right-Angle-Bend Bracket

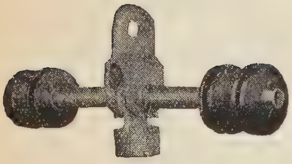


Bishop's Crook Bracket

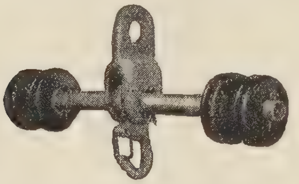
Cat. No. Green Paint Finish	Cat. No. Galvanized Finish	Description	Pipe Diam. In.	Bracket Lgth. In.	Wt. Lbs. Net	Wt. Lbs. Ship.
1229475G22	1229475G21	Goose-Neck	¾	48	7	8
1229475G40	1229475G39	Goose-Neck with 1¼-Inch Adapter	¾	48	7	8
1229475G26	1229475G25	Goose-Neck	1	48	8	9
1229475G15	1229475G16	Bishop's Crook	1¼	21⅜	..	..
1229475G79	1229475G80	Right-Angle-Joint with Scroll and 3-Inch Hole Pole Plate	1¼	47¼	22	24
1229475G 3	1229475G 4	Right-Angle-Bend with Scroll	1¼	48	21	23

G-E Novalux Hangers

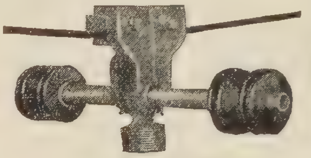
For Novalux Suspension Luminaires



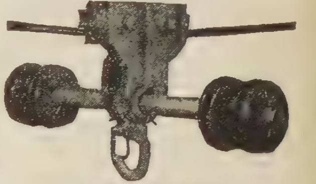
Cat. No. 3717173G1



Cat. No. 3717173G2



Cat. No. 3717173G3



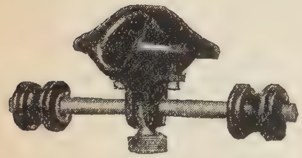
Cat. No. 3717173G4

Cat. No. 4802132G6

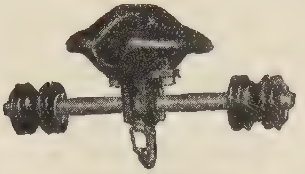
Cat. No. 4802132G5

Cat. No. 4802132G8

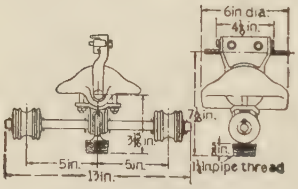
Cat. No. 4802132G7



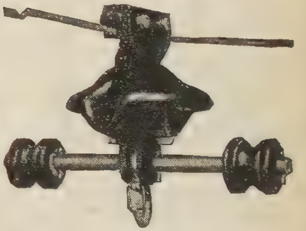
Cat. No. 4802132G2



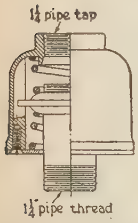
Cat. No. 4802132G1



Cat. No. 4802132G4

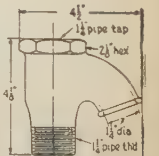


Cat. No. 4802132G3



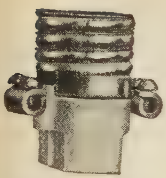
Cat. No. 37X716
Spring Hanger

Cat. No.	Description	Wt. Lbs. Net	Wt. Lbs. Shipping
3717173G1	Eye-Suspension with Stud and Crossarm	3	4
3717173G2	Eye-Suspension with Hook and Crossarm	3	4
3717173G3	Clamp-Suspension with Stud and Crossarm	4	5
3717173G4	Clamp-Suspension with Hook and Crossarm	4	5
4802132G6	Eye-Suspension with Stud and Insulator	4	9
4802132G5	Eye-Suspension with Hook and Insulator	4	9
4802132G8	Clamp-Suspension with Stud and Insulator	6	11
4802132G7	Clamp-Suspension with Hook and Insulator	6	11
4802132G2	Eye-Suspension with Stud, Crossarm and Insulator	6	11
4802132G1	Eye-Suspension with Hook, Crossarm and Insulator	6	11
4802132G4	Clamp-Suspension with Stud, Crossarm and Insulator	8	13
4802132G3	Clamp-Suspension with Hook, Crossarm and Insulator	8	13
114013	Suspension Eye for Main Insulators	..	..



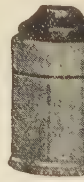
Cat. No. 4830380P1
Cable Inlet

G-E Sockets and Receptacles


No. 45X841

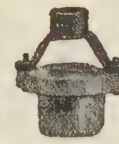
No. 45X850

No. 129804


No. 159377

No. 129803

No. 28795


No. GE427

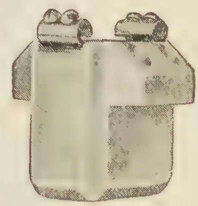
No. 4815866G1

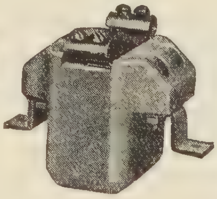
No. 4815845P1

No. 12X491

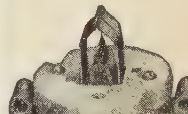
No. 60X161

No. 25720


No. 4815233G1


No. 4815794G5

No. 4815089G1


No. 39X348

No. 39X330

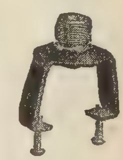
No. 1257712G4

No. 4830217G1

No. 1257712G3

No. GE070

No. 20X45


No. 25714

Multiple Socket

Cat. No.	Description	Std. Pkg.	Ship. Wt. Lbs. Std. Pkg.
	Mogul Base		
45X841	Skeleton Type	100	35
45X850	Skeleton Type for Form 45-L Units	100	35
129804	Porcelain	100	65
159377	Porcelain with ½-Inch Pipe Tap	50	80
	Medium Base		
129803	Porcelain	100	35
28795	Porcelain Type for Form 45-L Units	100	35
GE427	Porcelain with Yoke for ½-Inch Pipe	100	50
	Series Socket		
	Mogul Base		
4815866G1	Porcelain	100	80
4815845P1	Porcelain Shell Only	50	18
4815866G2	Composition (Black)	50	45
4815845P2	Composition Shell Only (Black)	50	18
4815866G3	Composition (White Finish)	50	45
4815845P3	Composition Shell Only (White Finish)	50	18
12X491	Extension—Porcelain	50	50
60X161	Contact Shell and Prong Assembly Only	50	15
	Medium Base		
25720	Porcelain	50	50
	Series Receptacles		
4815233G1	Porcelain for Ornamental and Form 52 Luminaires	20	25

Series Receptacles

Cat. No.	Description	Std. Pkg.	Ship. Wt. Lbs. Std. Pkg.
4815794G5	Porcelain for Ornamental Luminaires.	20	25
4815089G1	Porcelain for Form 45-L Units	20	25
*39X348	Porcelain for Suspension Units	100	75
*39X330	Porcelain with Iron Yoke (⅞ Inch, 18 Thread)	20	20
1257712G4	Porcelain with Iron Yoke (⅞ Inch, 18 Thread) and Spacers	20	25
	Combination Series		
	Socket and Receptacle		
*4830217G1	Consists of Cat. Nos. 39X348, 4815866G1 and Yoke Cat. No. 25714.	25	50
1257712G3	Same as Above but with Spacers	25	50
	Adapters		
GE070	For Operating Medium Screw Base Lamps from Mogul Socket	100	25
20X45	Mogul Extension—2½ Inches	50	46
	Yokes		
25714	Iron Yoke Only (⅞ Inch, 18 Thread) with 2 Screws Cat. No. 48X758, Used with Cat. No. 39X330	100	35

*Cannot be used in old type bracket and suspension luminaires using bell-type hoods, Cat. No. 46218 or Cat. No. 189625.

G-E Film Cutouts

For Use with G-E Series Sockets on Series Incandescent Circuits

Enclosed Copper-Oxide Disc Type

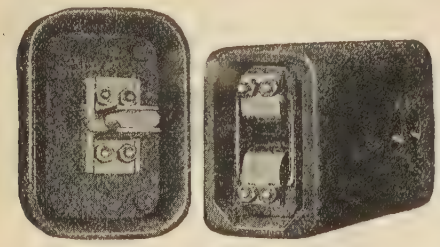
Cat. No.	Probable Limits of Breakdown in Volts	Color of Washer	Diameter Inches	Std. Pkg.	Ship. Wt. Oz. Std. Pkg.
4815602G2	50–90	Brown	¾	50	2
4815602G1	100–200	Black	¾	50	2
4815602G3	250–350	Red	¾	50	2
4815920G2	50–90	Brown	9/16	50	1⅕
4815920G1	100–200	Black	9/16	50	1⅕

Enclosed Copper-Oxide Disc Type

Cat. No.	Probable Limits of Breakdown in Volts	Color of Washer	Diameter Inches	Length Inches	Std. Pkg.	Ship. Wt. Oz. Std. Pkg.
4815920G3	250–350	Red	9/16	...	50	1⅕
4815603G2	50– 90	Brown	27/64	...	100	1½
4815603G1	100–200	Black	27/64	...	100	1½
		Magazine Type				
15X729	100–250	......	5/16	13/16	500	½

G-E Form F-100-B Novalux Pothead Cutouts

For Ornamental Street-Lighting Units



Cat. No. 3732073G1

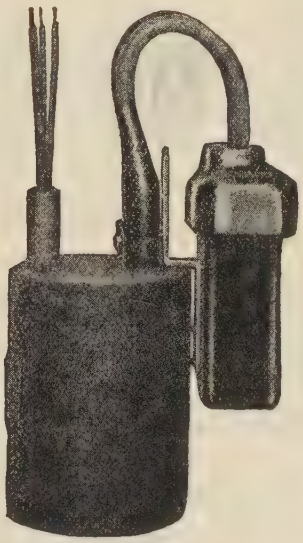
For use with ornamental series street-lighting circuits for mounting in the base of the smaller lighting standards.

Consists of two sections, the box and plug, both made of special process porcelain. Plug is equipped with flat contact strips, insulated from each other. Provision is made at top part of plug so that insulating compound can be poured in round the leads. Box contains four flat phosphor-bronze springs. Contacts are assembled within an air expulsion chamber.

If it is desired to use cutout for disconnecting several lamps, this chamber may be filled with G-E No. 21 Oil.

At the top of box, a hole is provided through which insulating compound can be poured. Two holes are provided in bottom of contact of cutout for parkway cable.

Cutout with Spade Bracket and Cable Clamp, Cat. No. 3732073G2



Cutout with Strap for IL Transformer Mounting, Cat. Nos. 3732073G5 or 3732073G6 Mounted on Side

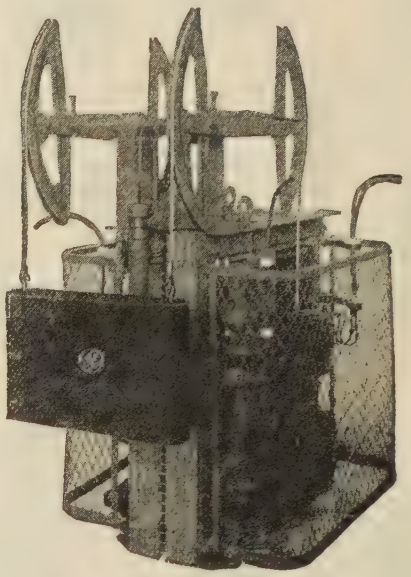
Cat. No.	Description	Std. Pkg.	*Ship. Wt. Lbs. Std. Pkg.	*Net Wt. Lbs. Ea.
3732073G1	Pothead Cutout Only	10	125	9
3732073G2	Cutout with Spade Bracket and Cable Clamp for Mounting in Base of Ornamental Pole	10	200	13
3732073G7	Cutout with Spade Bracket, Less Cable Clamp, for Mounting in Base of Ornamental Pole	10	...	12
3732073G5	Cutout with Bracket for Mounting on Type IL Transformer with 5 31/32-Inch Diameter Can	10	140	10
3732073G6	Cutout with Bracket for Mounting on Type IL Transformer with 5 11/32-Inch Diameter Can	10	140	10
3732073G4	Cutout with Bracket and Gasket, for Mounting on Ornamental Pole	10	140	10

*Without compound.

G-E Non-Automatic Station Type RV-2 Novalux Constant-Current Transformers

For Operating A.C. 6.6-Ampere Series Lighting Loads

2300 Volts (with 80 Per Cent Load Tap)—60 Cycles



A non-automatic, station type, constant-current transformer designed for use in central stations or substations where an operator is in attendance.

Because of the general adoption of the series system for street lighting installations, it is necessary to have a transformer that will convert constant potential energy to a constant-current energy. This requires a regulating device with a floating coil.

In many instances it is desirable to install a constant-current transformer in a station that is always attended. The Type RV-2 transformer is non-automatic and admirably serves this purpose.

Transformers are built in standard sizes ranging from 5 to 70 kw. output, or in special sizes for any commercial secondary current or frequency, or for any primary potential up to and including 13200 volts. The standard rating is 60 cycles, 2300 volts on the primary, and 6.6 amperes on the secondary.

The exceptionally fine regulation of the constant-current transformers insures rated lumen output, and full life of lamp. The transformer will maintain the secondary current within 1 per cent above or below normal from full load to short circuit, provided the primary potential and frequency remain at rated values.

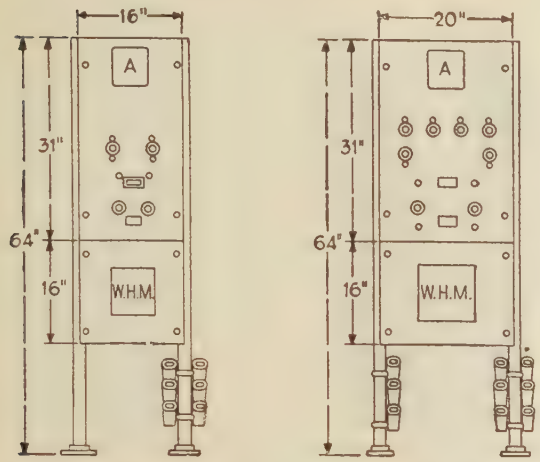
Cat. No.	Normal Kw. Rating	Primary Amp.	Primary Kv-a. Input	Normal Secondary Load Volts	Secondary Open Circuit Volts	Shipping Wt. Lbs.
3167600	5	2.68	6.17	758	910	600
3167602	10	5.35	12.30	1515	1820	825
3167604	15	8.02	18.45	2275	2725	1050
3167606	20	10.68	24.60	3030	3630	1225
3167608	25	13.40	30.80	3790	4550	1425
3167610	30	16.05	37.00	4550	5455	1625
*3167614	40	21.40	49.25	6060	7275	1925
*3167616	50	26.80	61.70	7580	9110	2250
*3167618	60	32.20	74.10	9100	10910	2750
*3167620	70	36.80	84.70	10600	12500	3075

*Built with multi-circuit secondary. Can be operated either single or multi-circuit.

G-E Plug Switch Panels

For Non-Automatic Station Type RV-2 Novalux Constant-Current Transformers

6.6 or 7.5 Secondary Amperes, 2300 Volts



For 1 Transformer and 1 Lamp Circuit

For 1 Transformer and 2 Lamp Circuits

The panels and subbase are asbestos-ebony, 1½ inches thick with ¼-inch bevel, and are mounted on a self-supporting framework of 1¼-inch pipe 64 inches high. Blue Vermont marble may be substituted for asbestos-ebony at a slight increase in price.

Instruments and meters have the G-E Company's standard dull-black finish, while the supporting framework is black japanned.

Lightning arresters are recommended for each lamp circuit. They are not included with these panels and must be ordered separately.

Each panel Cat. No. includes one panel with framework, a 5-ampere Type AD ammeter with 10-ampere scale, current transformer, fused primary plug switches, secondary plug switches, necessary plugs, plug racks, card holders and nameplate.

Each watthour meter Cat. No. includes one subbase with pipe fittings, 110-volt, 5-ampere Type IS-8 single-phase watthour meter, current transformer, and potential transformer with fuses and supports.

Panels for 1 Transformer and 1 or 2 Lamp Circuits

Normal Kw. Rating	Amp. Cap. Primary Fuses (Main Panel)	Current Transformer Cap. Amp. (Watthour Meters Subbase)	Panels for 1 Lamp Circuit: Main Panel Cat. No.	Panels for 1 Lamp Circuit: Watthour Meter Subbase Cat. No.	*Panels for 2 Lamp Circuits: Main Panel Cat. No.	*Panels for 2 Lamp Circuits: Watthour Meter Subbase Cat. No.
5	4.0	10	2X518	2X538	2X528	2X548
10	6.0	20	2X519	2X539	2X529	2X549
15	10.0	30	2X520	2X540	2X530	2X550
20	12.0	40	2X521	2X541	2X531	2X551
25	15.0	50	2X522	2X532	2X532	2X552
30	20.0	60	2X523	2X543	2X533	2X553
40	25.0	80	2X524	2X544	2X534	2X554
50	30.0	80	2X525	2X545	2X535	2X555
60	40.0	100	2X526	2X546	2X536	2X556
70	40.0	125	2X527	2X547	2X537	2X557

Panel for 1 Transformer with 1 Lamp Circuit..each **$380.00**
Panel for 1 Transformer with 2 Lamp Circuits..each **540.00**
Subbases with Watthour Meters, for 1 or 2-Circuit Panels.....each **240.00**

*Two-circuit panels up to and including 30 kw. are for transformers with single-circuit secondaries. Above 30 kw. panels are arranged for multi-circuit secondary transformers.

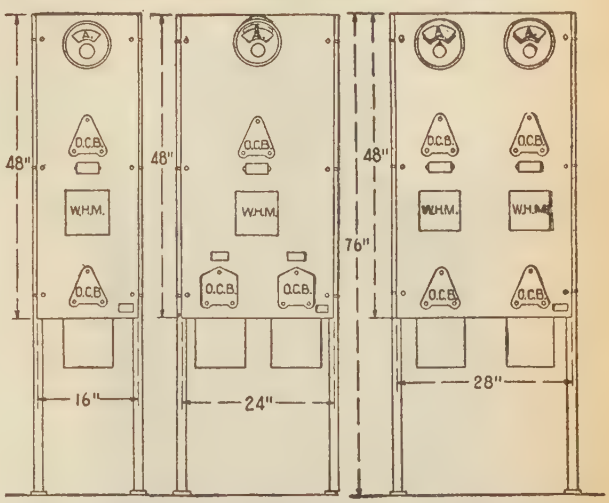
Pellet Arresters—For Outdoor Service Only

Sgl. Pole Cat. No.	Each	Normal Kw. Rating	Approx. Ship. Wt. Lbs.	Sgl. Pole Cat. No.	Each	Normal Kw. Rating	Ship. Wt. Lbs.
9LA10A2	$14.00	5–15	11	9LA10A6	$46.00	50	37
9LA10A4	26.00	20–30	18	2596671G3	60.00	60 & 70	47
2596671G2	34.00	35 & 40	37	.....	.....	.....	..

G-E FK-41 Oil Circuit Breaker Panels

For Non-Automatic Station Type RV-2 Novalux Constant Current Transformers

6.6 or 7.5 Secondary Amperes, 2300 Volts



For 1 Transformer and 1 Lamp Circuit

For 1 Transformer and 2 Lamp Circuits

For 2 Transformers with 1 Lamp Circuit per Transformer

Designed for the control of one single-circuit secondary or multi-circuit secondary constant current transformer and either one or two lamp circuits per transformer. Lamp circuits may be either arc or incandescent. Panels are for separate installation near the transformers they are to control and are not suitable for assembly in a switchboard.

Each panel Cat. No. includes panel with framework, 5-amp. Type AD ammeter with 10-amp. scale, current transformer, necessary oil circuit breakers mounted on back of panel, enclosed primary fuses, card holders and name plate.

Each watthour meter Cat. No. includes 110-volt, 5-amp. Type IS-4 single-phase watthour meter, current transformer and potential transformer with fuses and supports. Watthour meter is mounted on front of main panel and instrument transformers and fuses on the back.

Panels for 1 Transformer and 1 or 2 Lamp Circuits

Normal Kw. Rating	Amp. Cap. Primary Fuses (Main Panel)	Current Transformer Cap. Amp. (Watthour Meter Equipment)	Panels for 1 Lamp Circuit: Main Panel Cat. No.	Panels for 1 Lamp Circuit: Watthour Meter Equipment Cat. No.	*Panels for 2 Lamp Circuits: Main Panel Cat. No.	*Panels for 2 Lamp Circuits: Watthour Meter Equipment Cat. No.
5	4.0	10	2X438	258606	2X450	258606
10	6.0	20	2X439	258607	2X451	258607
15	10.0	30	2X440	258608	2X452	258608
20	12.0	40	2X441	258609	2X453	258609
25	15.0	50	2X442	258610	2X454	258610
30	20.0	60	2X443	258611	2X455	258611
35	20.0	60	.....	.....	2X456	258612
40	25.0	80	.....	.....	2X457	258613
50	30.0	80	.....	.....	2X458	258614
60	40.0	100	.....	.....	2X459	258615
70	40.0	125	.....	.....	2X460	258616

Panel for 1 Transformer and 1 Lamp Circuit...each **$380.00**
Panel for 1 Transformer and 2 Lamp Circuits. each **245.00**
Watthour Meter Equipment for 1 Transformer with 1 or 2 Lamp Circuits per Transformer.....each **100.00**

Panels for 2 Transformers with 1 Lamp Circuit per Transformer

5	4.0	10	2X444	258617	.....	.....
10	6.0	20	2X445	258618	.....	.....
15	10.0	30	2X446	258619	.....	.....
20	12.0	40	2X447	258620	.....	.....
25	15.0	50	2X448	258621	.....	.....
30	20.0	60	2X449	258622	.....	.....

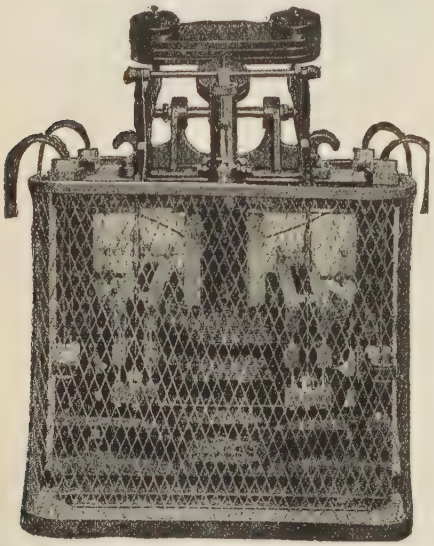
Panel for 2 Transformers with 1 Lamp Circuit per Transformer.....each **$350.00**
Watthour Meter Equipment for 2 Transformers with 1 Lamp Circuit per Transformer.....each **540.00**

*Two-circuit panels up to and including 30 kw. are for transformers with single-circuit secondaries. Above 30 kw. panels are arranged for multi-circuit secondary transformers.

G-E Automatic Station Type RF Novalux Constant-Current Transformers

For Operating A.C. 6.6-Ampere Series Lighting Loads

†2300 Volts (No Taps)—60 Cycles



Type RF with Cage

Designed for use in an unattended substation. Can be used for any indoor installation.

Built in practically any capacity and for any commercial voltage, frequency and secondary current; but it is recommended that, on account of the high secondary voltage, capacities not exceeding 20 kw. be operated with single-circuit secondary. Sizes from 25 to 70 kw. are furnished with multi-circuit secondary.

Can be started up automatically with coil together and with only one lamp on circuit, regardless of capacity of transformer. Current surge not sufficient to destroy lamp.

Transformers are not provided with any taps, either for voltage or for partial load operation. Because constant voltage is maintained in the stations, no primary voltage tap is necessary. Because of high inherent reactance of transformers, if a partial load tap is furnished, operating characteristic will be impaired.

Equipped with protective screening of expanded metal. Balancing mechanism supported on ball bearings.

Cat. No.	Each	Normal Kw. Rating	Primary Amp.	Trans. Kv-a. Input	Secondary Load Volts	Secondary Open Cir. Volts	Approx. Wt. Lbs. Ship.	Approx. Wt. Lbs. Net
3200500	**$960.00**	5	3	6.9	758	1035	600	400
3200501	**1120.00**	10	6	13.8	1515	2070	750	575
3200502	**1260.00**	15	9	20.7	2275	3100	950	750
3200503	**1340.00**	20	12	27.6	3030	4130	1100	875
3200504	**1560.00**	25	15	34.5	3790	5175	1300	1050
3200505	**1720.00**	30	18	41.4	4550	6200	1650	1300
***3200506**	**2180.00**	40	24	55.2	6060	8260	1850	1500
***3200507**	**2480.00**	50	30	69.0	7580	10350	2200	1850
***3200508**	**2700.00**	60	36	82.8	9100	12400	2550	2150
***3200509**	**3080.00**	70	42	96.6	10600	14500	3000	2500

*Built with multi-circuit secondary. Can be operated either single or multi-circuit.

†All of these transformers will operate from 2200 to 2400 volts. No primary voltage tap or partial load tap provided. If 80 per cent load tap is desired, add 10 per cent.

G-E Pole Type RO Novalux Constant-Current Transformers

For Operating 6.6-Amp. Series Lighting Loads

°2300 Volts (with 2000-Volt Tap)-60 Cycles

The Type RO is a constant current transformer which operates automatically. It can be mounted on poles in remote districts or where subdivided downtown lighting circuits are desired. It can be controlled by Novalux controllers, time switch, or main oil switch at the station.

Built in sizes ranging from 1 to 30 kw., to operate at any commercial primary voltage and frequency or secondary current, but the standard transformer is for 60 cycles, 2300 volts on the primary and 6.6 amperes on the secondary. The 2300-volt transformer will operate satisfactorily on from 2200 to 2400 volts and a tap is provided on the primary for operation at 2000 volts without reduction of output.

The RO Transformer is positive and automatic in action, requiring no attendant or substation for starting or shutting down. A Novalux controller or similar remote control device can be used for operating the transformer. These features are combined with the same current regulation through as wide a range as offered by the best station-type-constant-current transformer. This feature alone practically guarantees the normal life of the Mazda lamps operating on a circuit controlled by such a transformer. The efficiency is almost the same as for the station-type transformer and the power-factor is 80 per cent at maximum load.

The high internal reactance of the transformer serves to protect the lamps at starting and acts instantaneously to check surges on the line which would otherwise tend to shorten the life of the lamps.

The moving secondary coil with its high repulsion gives almost perfect regulation from full load to dead short circuit. This feature not only protects the lamps from changes in current, because of changes in secondary load, but also protects the lamps from fluctuations in primary voltage.

Prices include oil.

Lightning arresters must be used on transformers on both primary and secondary for protection.

Cat. No.	Each	Normal Kw. Rating	Primary Amp. at Any Load	Trans. Kv-a. Input at Any Load	Normal Secondary Load Volts	Secondary Open Circuit Volts	§Approx. Wt. Lbs. Ship.	§Approx. Wt. Lbs. Net
***3167901**	**$580.**	1	.66	1.52	152	225	260	200
***3167902**	**600.**	2	1.26	2.90	303	430	275	215
****3167903**	**630.**	3	1.93	4.44	454	660	360	285
****3167904**	**680.**	5	3.15	7.25	757	1080	410	330
*****3167905**	**720.**	7.5	4.67	10.74	1137	1600	490	405
*****3167906**	**800.**	10	6.08	13.98	1515	2090	540	455
†**3167907**	**920.**	15	8.97	20.60	2272	3090	760	615
†**3167908**	**1060.**	20	11.94	27.46	3030	4115	835	700
‡**3167909**	**1230.**	25	14.84	34.13	3787	5110	1085	950
‡**3167910**	**1360.**	30	17.80	40.94	4545	6130	1210	1055

For special voltages other than 2300, information upon application. For special frequency (25, 30 or 40 cycles) in ratings up to and including 20 kw., add 30 per cent.

For 50 cycles, use 60-cycle prices.

For special frequency and special voltage, information upon application. For special secondary current only (from 5.5 to 20 amperes) use 6.6-ampere prices.

No. 10-C oil included in price: *17 gallons; **33 gallons; ***40 gallons; †65 gallons; ‡85 gallons.

§Weight of oil not included; add 7 pounds per gallon.

°The 2300-volt tap is good for operation from 2200 to 2400 volts and an extra tap is provided for operation at 2000 volts.

Hanger Hooks

For Transformers....kw.	1, 2, 3, 5	7.5, 10	15, 20	25, 30
Wt., per Pair.....lbs.	30	40	50	60

G-E Subway Type RO Novalux Constant-Current Transformers

For A.C. 6.6-Ampere Series Lighting Circuits

Single-Circuit Secondaries

A constant-current transformer designed to operate automatically and be mounted in subways or manholes. It can be controlled by Novalux controllers or by any of the present methods of remote control.

Since poles carrying circuits overhead are being removed from many of the city streets, it was found desirable to use some type of transformer which could be mounted underground and thereby connected directly to the underground feeder circuits and to the underground street lighting circuits. This requirement resulted in the development of a subway type RO transformer.

This transformer is almost identical with the pole type, except that it is enclosed in a specially designed cast iron water-proof tank. It is necessary on the 25 and 30-kw. size subway transformer to construct it in a double-deck type, because of the necessity for the transformers to be narrow enough to be lowered and installed in a manhole, the cover of which is only 32 inches in diameter, maximum. The four leads are each brought out at a separate terminal.

Subway transformers are equipped with oil indicating plugs installed in the tanks to indicate the oil level without requiring the removal of the cover. The tanks should be filled with the top oil plug open until the oil runs out and then the plug should be closed. To test for oil level at any time the lower indicating plug should be opened. In case the oil does not flow out, this plug should be closed again and the top plug opened, additional oil being poured in until it flows therefrom. The plug should then be closed again.

If the primary circuit leads into the subway from overhead, pole-type cutouts can be used. If, however, the primary circuit is entirely underground, the D and W subway fuse cutouts must be used.

Prices include oil and hanger hooks.

Cat. No.	Each	Normal Kw. Rating	Primary Amp. at Any Load	Trans. Kv-a. Input at Any Load	Secondary Load Volts	Secondary Open Circuit Volts	§Approx. Wt. Lbs. Ship.	Net
*3200781	$900	1	.66	1.52	152	225	640	440
*3200782	920	2	1.26	2.90	303	430	675	475
*3200783	940	3	1.93	4.44	454	660	705	505
**3200784	980	5	3.15	7.25	757	1080	1025	825
**3200785	1010	7.5	4.67	10.74	1137	1600	1100	900
**3200786	1070	10	6.08	13.98	1515	2090	1150	950
***3200787	1250	15	8.97	20.60	2272	3090	1310	1070
***3200788	1500	20	11.94	27.46	3030	4115	1455	1155
†(A)3200789	1710	25	14.84	34.13	3787	5110	1760	1560
‡(A)3200790	1830	30	17.80	40.94	4545	6130	1850	1700
†(B)3200791	1710	25	14.84	34.13	3787	5110	2700	2475
†(B)3200792	1830	30	17.80	40.94	4545	6130	2700	2475

For special voltages other than 2300, information upon application.

For special frequency only (25, 30 or 40 cycles) in ratings up to and including 20 kw., add 30 per cent.

For 50 cycles, use 60-cycle prices.

For special frequency and special voltage, information upon application. For special secondary current only (from 5.5 to 20 amperes) use 6.6-ampere prices.

Fuses and cutouts not included in Cat. No. or price.

Lightning arresters must be used on all transformers for protection, if supply and load circuits are not entirely underground.

No. 10-C oil included in price: *20 gallons; **50 gallons; ***65 gallons; †95 gallons; ‡90 gallons.

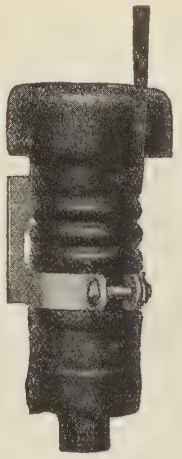
§Weight of oil not included; add 7 pounds per gallon.

2300-volt tap is good for operation from 2200 to 2400 volts; extra tap provided for operation at 2000 volts.

(A) single deck. (B) double deck.

G-E Type RO Pellet Lightning Arresters

Pole and Subway Type—Outdoor Service Only



Recommended for protection of both the primary and secondary sides of constant-current transformers.

Pellet arresters are single-pole, for outdoor use on both the constant potential side and the load side of constant-current transformers. Each design has a minimum and maximum voltage rating and under no circumstances should it be applied to a circuit the voltage of which can exceed the arrester's maximum rating as shown in the table. Where selection of arresters for the protection of the load side of the transformer is to be made, the arresters should never be applied to a transformer of a larger kilowatt rating than shown in the table.

For Protection of Primary Side of Transformers

Where Transformer is Connected to a System, the Neutral of Which is Not Grounded

*Cat. No.	Each	Circuit Voltage	No. of Arresters Required at Installation	Std. Pkg.	Approx. Ship. Wt. Lbs.
9LA10A2	$14.00	1000–3000	2	12	11
9LA10A4	26.00	3000–6000	2	12	18
2596671G2	34.00	6000–9000	2	6	37

Where Transformer is Connected to a System with a Solidly and Dead Grounded Neutral

9LA10A2	$14.00	3000–5000	‡	12	11
9LA10A4	26.00	6000–9000	‡	12	18

For Protection of Load Side of Transformers

*Cat. No.	Each	**Kw. Rating of Transformers	Std. Pkg.	Approx. Ship. Wt. Lbs. Each in Std. Pkg.
†2906822G2	$6.00	1, 2, 3	24	4
9LA10A2	14.00	5, 7.5, 10, 15	12	11
9LA10A4	26.00	20, 25, 30	12	18
2596671G2	34.00	35, 40	6	37
9LA10A6	46.00	50	6	37
9LA10A7	60.00	60, 70	6	47

*Only for installations at altitudes below 6000 feet. For altitudes above 6000 feet, obtain special recommendations.

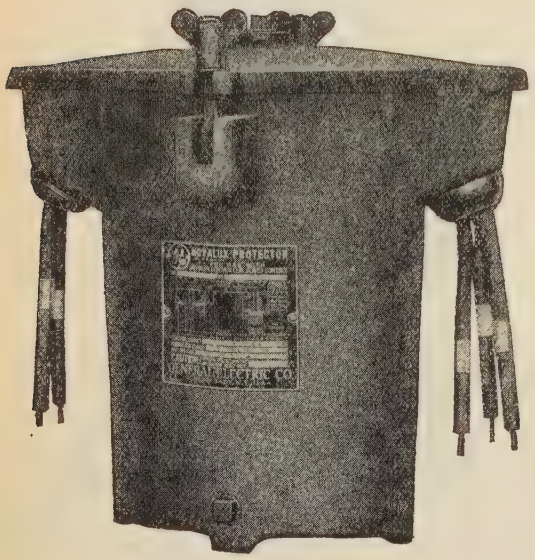
**Secondary amperes 6.6 and 7.5.

†Compression chamber type.

‡where transformer is connected between an outside wire and neutral, use one pellet arrester on outside wire. Use also on neutral wire a compression arrester, Cat. No. 146187 ($3.50 each, shipping weight 1.3 pounds; standard package 24) if voltage to ground is not over 300 volts; if, because of unbalancing, voltage is between 300 and 750 volts, use Cat. No. 2906822G3 ($6.00 each, shipping weight 4 pounds; standard package 24). Use two arresters at an installation made between outside wires.

G-E Novalux Protectors

For Use with Type RO Transformers and Novalux Controller



Open circuits in series street lighting systems are unavoidable, especially on aerial circuits, and it is desirable from the standpoint of "safety first", that when an open circuit does occur, the primary of the main transformer be de-energized. This Novalux protector has been developed to operate in conjunction with a CR7841 Novalux controller, and its function is to open up the switch in the controller as soon as an open circuit takes place.

The mechanism of the Novalux protector consists of two relay contactors with armatures connected together through a horizontal dashpot. One of the relays is energized by the controlling circuit, the other by the load circuit to be protected. Under operating conditions, the contacts of the series control type are open and the contacts on the multiple control type are closed. When an "open" occurs in the load circuit, the relay in the load circuit becomes de-energized and the control relay contacts are closed on the series type (opened on the multiple type) thus de-energizing the operating coil of the controller. This allows the controller contacts to open, de-energizing the primary of the constant-current transformer.

After the "open" in the load circuit has been repaired, the protector can be reset (reconnecting the transformer to the main system) by means of a push rod conveniently located at the top of the protector.

The protector is housed in a cast iron casing. The working parts are submersed in oil for insulating and dampening purposes.

Cat. No.	Each	Coil Rating: Control Circuit	Coil Rating: Protected Circuit Amperes	Coil Rating: Type of Control Circuit	*Ship. Wt. Lbs.
3045291	$132.00	6.6 Amps.	6.6	Series	60
3045292	132.00	6.6 Amps.	7.5	Series	60
3045293	132.00	7.5 Amps.	7.5	Series	60
3045294	132.00	7.5 Amps.	6.6	Series	60
3045295	132.00	110 Volts	6.6	Multiple	60
3045296	132.00	110 Volts	7.5	Multiple	60

*Less Oil.

G-E Type CR7841-C Novalux Remote-Control Apparatus

Pole Type Without Top

Designed to control Type RO pole or subway transformers by means of an adjacent series circuit or a multiple pilot-wire control circuit. With either series operating coil rated from 2.5 to 20 amperes at any frequency or with shunt operating coil at 110, 220, 440 volts, 50 or 60 cycles or 110, 220 volts, 25 cycles; in three types—normally operated, normally closed, latched-in. Also furnished for subway mounting when necessary. Switch is for use on any voltage up to and including 7500 volts and the most popular voltages with current ratings are as follows: At 7500 volts switch will break 15 amperes; 6600 volts, 25 amperes; 4500 volts, 35 amperes; 2300 volts, 50 amperes or 220 volts, 100 amperes. Operates at any frequency.

Subway Type

The wattage of operation coil is such that enough heat is generated to overcome any congealing effect and switch may be used in almost any weather condition which will be encountered in the northern hemisphere, without sluggish operation. The high-potential test on this controller is 25000 volts from power to control from power to ground, or from control to ground.

Pole type switch is mounted in pressed metal casing with cast iron cover which is not connected to switch mechanism.

Three moving parts —two readily replaceable contact tips and solenoid, together with necessary levers.

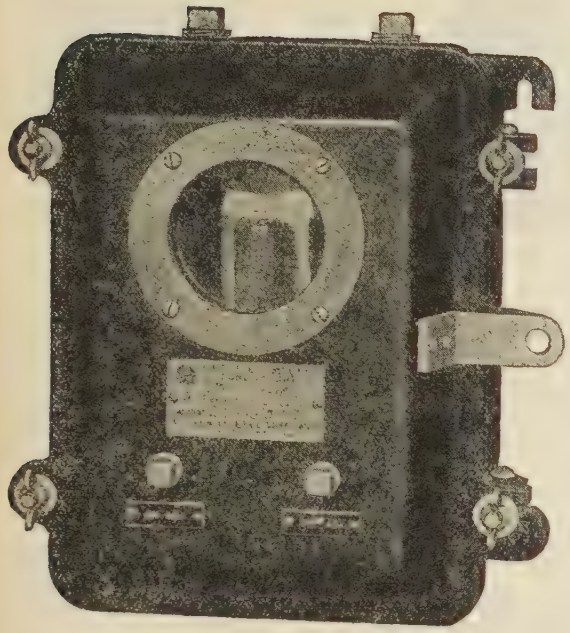
Subway design switch is same as pole type in respect to electrical characteristics. Tank and cover are cast iron. All connectors are arranged for wiped joints.

All-Night Latch Type

Identical with the CR7841-C rated 7500 volts, 15 amperes, except that it is equipped with a special latch with following operation: When control circuit, either series or multiple, is first turned on, controller will engage and lock in. If control circuit fails or is disconnected, controller still remains engaged. If control circuit is again energized, controller still remains engaged but will be unlatched. When control circuit is again de-energized, controller will drop out. This is designated as the all-night latch type, CR7841-C5-11 (with series operating coil) and CR7841-C6-12 (with shunt operating coil).

The hand lever may be used to close the controller manually, and the controller may be disconnected by operating the control coil by means of the hand lever.

G-E Type CR7505-H5 Novalux Photoelectric Controllers



For controlling sign lights, floodlights, street lighting circuits, airway and airport lighting. An efficient master of the lighting circuits which it controls by responding to changes in daylight intensity.

Cover has a window of clear glass which allows light to fall on phototube.

The device consists of phototube, Pliotron amplifying tube with associated apparatus, sensitive relay, thermal timer, CR2820-1713 relay and CR2810-1265 contactor. Controlling element is the phototube. With a voltage of proper magnitude and polarity applied between the two elements, the device passes a current proportional to the amount of light falling on it. The current (a few micro-amperes) which is set up in the phototube is amplified by a tube of the G-E Pliotron type. A sensitive relay is connected in plate current circuit of Pliotron, and is energized or de-energized in accordance with amount of light on phototube. Contactor is picked up and dropped out only when sensitive relay is in extreme "in" or "out" position, and then only after a few seconds time delay caused by thermal timer. With two adjustments, one of which controls intensity at which unit picks up in evening; the other controls intensity at which unit drops out in morning.

Contact ratings of 1265 relay: 15 amperes rating at 110 volts a.c.; 15 amperes, 220 volts a.c.; 10 amperes, 125 volts, d.c.; 5 amperes, 250 volts d.c.; 2.4 amperes, inductive load, 125 volts d.c.; 1.2 amperes, inductive load, 250 volts d.c. Rating of 1265 contactor would be 4 amperes at 110 volts a.c. with a lamp load.

Complete information and prices on application.

G-E Type SL Novalux Series Transformers

Subway and Aerial Types
Protective Device and Film Cutouts
For 60-Cycle, 6.6-Ampere Constant-Current Circuits

Pole Type

The Type SL Transformer is an insulating transformer, the primary winding of which is energized from a long series circuit and the secondary of which is used for supplying current to a small number of lamps connected in series and located where the high potential of the ordinary current series circuit would be objectionable.

Certain classes of lighting require a lower potential than is found on long series lighting circuits, and yet as they function similarly, it is desirable to control them simultaneously with the street lights.

The Type SL Transformer affords an ideal method for this control as the low-voltage series circuit is turned on and off with the closing or opening of the main constant current transformer circuit.

Fixtures with series sockets and film cutouts must be used on these transformers.

The 0.04 to 1-kw. sizes contain no compound; 1 to 5-kw. sizes are compound filled; both are air-cooled. The 5, 7.5 and 10-kw. sizes are oil-filled.

Suspension hooks are furnished with all Type SL Transformers which have a capacity of over 4 kw. If cross arm suspension is required, specify hanger brackets.

Protective devices are included with the transformers except as noted. On subway-type transformers of 0.25 to 4-kw. capacity, the protective device is assembled in the cap of the transformer.

Subway Type

Kw. Output at Unity P-f. Load	Aerial Type Cat. No. (6.6-Amp. Prim. and Secondary)	Each	Ship. Wt. Lbs.	Subway Type Cat. No. (6.6-Amp. Prim. and Secondary)	Each	Ship. Wt. Lbs.
0.04	†195588	$27.00	20	†195608	$27.00	32
0.10	†195589	31.00	24	†195609	31.00	34
0.25	247012	48.00	36	‡224345	48.00	47
0.50	247013	51.00	38	‡224346	51.00	53
1.00	247014	66.00	68	‡224347	66.00	75
2.00	247015	78.00	83	‡224348	78.00	97
3.00	247016	100.00	126	‡245953	100.00	140
4.00	15x863	142.00	174	‡15x865	142.00	180
5.00	247018	191.00	290	247031	306.00	500
7.50	247019	234.00	400	247032	336.00	540
10.00	247020	264.00	470	247033	366.00	570

†Can also be furnished with 7.5-amp. primary and secondary; or 6.6 or 7.5-amp. primary and 15 or 20-amp. secondary.
‡Protective device not required and not included in these Cat. Nos. All other Nos. include protective device.

Protective Device and Film Cutouts

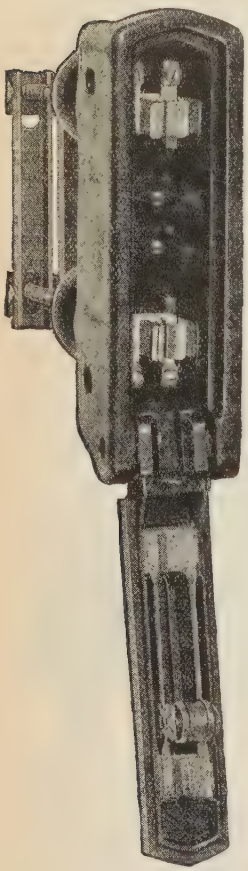
Protective device and film cutout are the same for either 6.6 or 7.5-ampere secondary.

Protective devices are included in Cat. No. of SL transformer except as noted. This information is for ordering separate devices and film cutouts.

Transformer Kw. Output	Pole Type Protective Devices Cat. No.	Each	Shipping Wt. Lbs.	Film Cutouts Cat. No.	Each	Approx. Breakdown Voltage	Shipping Wt., Lbs. per 100
0.25	247063	$7.50	10	4815602G2	$6.50	50–100	¼
0.50	247063	7.50	10	4815602G1	6.50	100–200	¼
1.0	247064	7.50	10	4815602G3	6.50	250–350	¼
2.0	6X605	7.50	10	6X611	30.00	350–525	3
3.0	6X606	7.50	10	6X612	30.00	525–790	3
4.0	6X607	7.50	10	6X613	30.00	700–1050	3
5.0	6X608	7.50	10	6X614	30.00	875–1310	3
7.5	6X609	7.50	10	6X615	30.00	1310–1950	3
10.0	6X610	7.50	10	6X616	30.00	1750–2625	3
Subway Type Protective Devices							
5.0	247069	$24.00	10	.....	.....	.....	...
7.5	247070	24.00	10	.....	.....	.....	...
10.0	247071	24.00	10	.....	.....	.....	...

G-E Novalux Cutouts

For Type SL Transformers and Loop Sectionalizing Application



Cutout with Thyrite By-Pass

Disconnecting switch for Type SL transformers rated up to 10 kw., 6.6 to 20 amperes primary; 7.5 kw., 5 amperes primary.

For loops not exceeding 1500 volts (load voltage) 4 to 20 amperes.

Surge voltage by-pass when new Thyrite by-pass is included.

Open circuit shunt, short circuiting transformer or loop in case of sustained open circuit (as from broken line or burnt-out transformer) when Thyrite by-pass or film cutout is used.

Use on any series constant-current circuit up to 10000 volts (operating voltage) to ground, up to 20 amperes normal current.

Thyrite by-pass (or film cutout) must be used in all cases except where connected load consists of Type SL transformer with secondary protective device. If Novalux cutout with Thyrite by-pass or film cutout is used, secondary protective device can be omitted.

Standard package, 2; shipping weight, 27 pounds.

Cat. No. and price do not include Thyrite by-pass or film cutout.

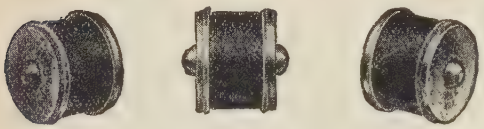
Cat. No. **2991604G1**,

Cutout with Cross-Arm Hanger.....each **$23.00**

Cat. No. **2991604G2**,

Cutout with Channel Hanger.....each **23.00**

Thyrite By-Pass



Consists of small Thyrite cylinder, two metal end-caps with electrodes forming enclosed spark gap, and one fusible washer pressed on gap electrode.

Thyrite has a negative resistance characteristic, the resistance decreasing as applied voltage is increased.

The Thyrite cylinder is designed so that the rated maximum normal operating voltage produces negligible loss—in the order of 1 watt. A high voltage surge traveling on the line finds in it a low resistance path across the transformer or loop, however, and is therefore by-passed.

Extra heavy surges arc over the spark gaps without damage to cutout or connected apparatus. Power current flows only until end of first half cycle.

Sustained overvoltage due to open circuit in load greatly increases heating in Thyrite cylinder, melting fusible washer, mechanically completing circuit between end caps, short circuiting load. Time: approximately 1½ minutes, depending on voltage applied.

Cat. No.	Each	Maximum Normal Operating Voltage	Minimum Open Circuit Voltage	Color	Approx. Ship. Wt. Oz.
9F5A1	**$5.50**	500	1000	Gray	2
9F5A2	**5.50**	750	1500	Blue-Black	2
9F5A3	**5.50**	1000	2000	Brown	2
9F5A4	**5.50**	1500	3000	Bright Red	2

Pole-Base Type

G-E Type IL Novalux Series Transformers

For Use on 60-Cycle, 6.6-Ampere Constant-Current Circuits

Allow the use of high efficiency series lamps where high potential is impracticable and unsafe. No film cutout is required; each lamp is independent of the others in circuit. In case of an accident to one or more, remainder of lamps on circuit burn without interruption.

For use with pendent units, transformers can be mounted on the cross arms of poles.

When lamp wattage varies between 8% above and 20% below normal, secondary current will not vary more than 1.0% with normal primary current and frequency.

Single Light

For operating one 6.6, 15, or 20-ampere series lamps from 6.6-ampere constant-current circuit.

Vault or Manhole Type with Primary and Secondary Detachable Couplings—Form B-55

Pole Base Type with Primary Coupling and Secondary Wiping Sleeve—Form B-5

Vault Cat. No.	Vault Each	Pole Base Cat. No.	Pole Base Each	†Lumens	Lamp Rating Amp.	†Open Circuit Effective Voltage	Ship. Wt., Lbs.
4X583	$48.00	4X577	$44.50	1000/2500	6.6	102	23
4X582	56.00	4X576	52.50	2500/4000	6.6/15	164	34
4X581	57.00	4X575	53.50	4000/6000	15/20	110	34
4X580	58.00	4X574	54.50	6000/10000	20	117	35
4X579	78.00	4X573	74.50	10000/15000	20	184	62
§4X578	93.00	§4X572	89.50	15000/25000	20	208	66

Pole Base Type with Wiping Sleeves—Form B-2
Aerial Type with Porcelain Bushings—Form A-2

Wiping Sleeve Cat. No.	Wiping Sleeve Each	Aerial Cat. No.	Aerial Each	†Lumens	Lamp Rating Amp.	†Open Circuit Effective Voltage	Ship. Wt., Lbs.
18X834	$31.80	.....	.....	800/1000	6.6	102	19 19
4X571	34.00	4X565	$34.00	1000/2500	6.6	102	19 19
4X570	41.50	4X564	41.50	2500/4000	6.6/15	164	27 27
4X569	42.00	4X563	42.00	4000/6000	15/20	110	29 29
4X568	43.00	4X562	43.00	6000/10000	20	117	30 30
4X567	64.00	4X561	64.00	10000/15000	20	184	56 55
§4X566	80.00	§4X560	80.00	15000/25000	20	208	60 59

Two Light—In Series

For operating two 6.6, 15, or 20-ampere Mazda series lamps (in series) from 6.6-ampere constant-current circuit.

Transformers operate two lamps (in series) on the secondary. To avoid interruption of service fixtures with series sockets and film cutouts must be used. If both lamps on secondary burn out transformers operate with secondary short circuited.

***Pole Type Base with Primary Couplings and Secondary Wiping Sleeves—Form B-6**

Cat. No.	Each	Lamp Rating †Lumens	Amp.	†Open Circuit Effective Voltage	Ship. Wt. Lbs.
§286550	$62.00	1000+1000/2500+2500	6.6	189	33
§286549	76.20	2500+2500/4000+4000	6.6/15	312	54
§286548	86.60	4000+4000/6000+6000	15/20	184	56
§286547	97.00	6000+6000/10000+10000	20	195	64
§286546	125.50	10000+10000/15000+15000	20	308	112

Pole Base Type with Wiping Sleeves—Form B-4

§286545	$51.00	1000+1000/2500+2500	6.6	189	28
§286544	65.20	2500+2500/4000+4000	6.6/15	312	48
§286543	75.60	4000+4000/6000+6000	15/20	184	50
§286542	86.00	6000+6000/10000+10000	20	195	57
§286541	114.50	10000+10000/15000+15000	20	308	107

Aerial Type with Porcelain Bushings—Form A-3

§286540	$51.00	1000+1000/2500+2500	6.6	189	28
§286539	65.20	2500+2500/4000+4000	6.6/15	312	47
§286538	75.60	4000+4000/6000+6000	15/20	184	49
§286537	86.00	6000+6000/10000+10000	20	195	57
§286536	114.50	10000+10000/15000+15000	20	308	107

Special transformers can be furnished for any commercial current, frequency, or lumen lamps. *Can be furnished in vault type.

†1000/2500-lumen transformers are 1:1 ratio and secondary leads supply 6.6 amperes for both 1000 and 2500-lumen lamps. 2500/4000-lumen transformers have secondary leads supplying 6.6 amperes for 2500-lumen lamps and 15 amperes for 4000-lumen lamps. 4000/6000-lumen sizes also have leads which furnish 15 amperes for 4000-lumen lamps and 20 amperes for 6000-lumen lamps. 6000/10000, 10000/15000 and 15000/25000-lumen sizes have one set of secondary leads only supplying 20 amperes since the current required on all the leads is the same.

‡Maximum voltage which can be obtained by means of a voltmeter.

§Series sockets with film cutouts must be used with these transformers.

G-E Type H Distribution Transformers

Single-Phase, 60 Cycles, Self-Cooled

G-E Single-Phase Distribution Transformers are built on the distributed core, which has been found best adapted both electrically and mechanically to this type of transformer.

Various coil constructions have been developed to meet the particular requirements of designs depending upon unit size and voltage rating. In the larger sizes, circular coils of either disk or cylindrical form are used on account of their greatly superior mechanical qualities, and the facilities they give for rigid mechanical support.

The windings of these G-E Distribution Transformers are carefully dried and filled under pressure with an insulating compound. This process not only removes all moisture from the insulation and seals the windings against the entrance of moisture, but also makes the winding a solid mass, thus giving it greater mechanical strength and heat conductivity. In the core-wound transformers this treatment is applied to the complete unit, consisting of core and coils. In the form-wound transformers the complete winding is treated as a unit before assembly on the core.

For Nominal 440 or 550-Volt Circuits

APPLICATION.—By connection of the low voltage leads outside the tank, transformers are arranged for series, multiple or three-wire service.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Hooks are provided with, and included in the weight of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Ratings:
Line No. 1—480/456/432 to 120/240
Line No. 2—600/570/540 to 120/240

Line No. 1 Cat. No.	Line No. 2 Cat. No.	Kv-a. Cont. Rating 55° C. Rise	Oil Req. Gals.	Approx. Ship. Wt. Lbs. Incl. Oil
47X 1	47X14	1.5	3½	150
47X 2	47X15	3	4½	180
47X 3	47X16	5	6	260
47X 4	47X17	7.5	9	340
47X 5	47X18	10	11	410
47X 6	47X19	15	21	600
47X 7	47X20	25	27	810
47X 8	47X21	37.5	32	1075
47X 9	47X22	50	40	1360
47X10	47X23	75	54	1735
47X11	47X24	100	50	1900
47X12	47X25	150	70	2340
47X13	47X26	200	102	3340

For Nominal 1150, 2300 and 4000Y-Volt Circuits

APPLICATION.—Transformers listed below are also suitable for operation as follows:
High Voltage Rating—1250/2500/4330Y
Low Voltage Rating—125/250
By connection of the low-voltage leads outside the tank, transformers are arranged for series, multiple or 3-wire service.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Hooks are provided with, and included in weight, of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Rating:
1200/2400/4160Y to 120/240

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X75	1.5	5¼	180	47X81	25	27	805
47X76	3	6	205	47X82	37.5	33	1070
47X77	5	8½	290	47X83	50	41	1345
47X78	7.5	9	340	47X84	75	54	1765
47X79	10	11½	415	47X85	100	50	1920
47X80	15	21	600	.....	.....	..	....

G-E Type H Distribution Transformers

Single-Phase, 60 Cycles, Self-Cooled For Nominal 2300 or 4000Y-Volt Circuits

APPLICATION.—Transformers in Line 1 below are also suitable for operation as follows:
High Voltage Rating—2500/4330Y
Low Voltage Rating—125/250
By connection of the low-voltage leads outside the tank, transformers having low-voltage rating of 120/240 are arranged for series, multiple or 3-wire service. Transformers having low-voltage rating of 240/480 are suitable for series and multiple service only.

SERVICE.—Suitable for indoor or outdoor installation.

SUPENSION HOOKS.—Hooks are provided with, and included in weight of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Rating:
Line No. 1—2400/4160Y to 120/240
Line No. 2—2400/4160Y to 240/480

Line No. 1 Cat. No.	Line No. 2 Cat. No.	Kv-a. Cont. Rating 55° C. Rise	Oil Req. Gals.	Approx. Ship. Wt. Lbs. Incl. Oil
47X27	47X43	1.5	3½	150
47X28	47X44	3	4½	180
47X29	47X45	5	6½	265
47X30	47X46	7.5	9	340
47X31	47X47	10	11½	415
47X32	47X48	15	21	600
47X33	47X49	25	27	800
47X34	47X50	37.5	30	1055
47X35	47X51	50	38	1330

For Nominal 2300 and 4000Y-Volt Circuits

APPLICATION.—Transformers listed in Line 1 below are also suitable for operation as follows:
High Voltage Rating—2500/4330Y/2375/2250
Low Voltage Rating—125/250
By connection of the low-voltage leads outside the tank, transformers are arranged for series and multiple service. Transformers having low-voltage rating 240/480 are suitable for series and multiple service only.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Hooks are provided with, and included in weight of all sizes up to 100 kv.-a., inclusive.

Name Plate Voltage Rating:
Line No. 1—2400/4160Y/2280/2160 to 120/240
Line No. 2—2400/4160Y/2280/2160 to 240/480

Line No. 1 Cat. No.	Line No. 2 Cat. No.	Kv-a. Cont. Rating 55° C. Rise	Oil Req. Gals.	Approx. Ship. Wt. Lbs. Incl. Oil
47X 97	47X106	1.5	3¼	150
47X 98	47X107	3	4½	180
47X 99	47X108	5	6	260
47X100	47X109	7.5	9	340
47X101	47X110	10	11	410
47X102	47X111	15	21	600
47X103	47X112	25	27	800
47X104	47X113	37.5	32	1075
47X105	47X114	50	40	1350
47X 36	47X 52	75	54	1755
47X 37	47X 53	100	50	1910
47X 38	47X 54	150	69	2285
47X 39	47X 55	200	103	3350

For Nominal 2300 or 4000Y-Volt Circuits

SERVICE.—Suitable for outdoor or indoor installations.

SUSPENSION HOOKS.—Hooks are provided with, and included in weight of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Rating:
2400/4160Y to 600

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X59	1.5	3½	150	47X66	37.5	30	1055
47X60	3	4½	180	47X67	50	38	1330
47X61	5	6½	265	47X68	75	54	1755
47X62	7.5	9	340	47X69	100	50	1910
47X63	10	11½	415	47X70	150	69	2285
47X64	15	21	600	47X71	200	101	3050
47X65	25	27	800	.....	.....	...	....

G-E Type H Distribution Transformers

Single-Phase, 60 Cycles, Self-Cooled

For Nominal 2200 and 3810Y-Volt Circuits

APPLICATION.—By connection of the low-voltage leads outside the tank, transformers are arranged for series, multiple or 3-wire service, with the exception of sizes 150 and 200 kv-a., which are suitable for series and 3-wire service only.

SERVICE.—For outdoor and indoor installation.

SUSPENSION HOOKS.—Hooks are provided with, and included in weight of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Rating: 2200/3810Y to 122/244

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
79041	1.5	3¼	150	**198392**	37.5	32	1060
79044	3	4½	180	**165759**	50	40	1340
165751	5	6	260	**165760**	75	54	1755
165752	7.5	9	340	**165761**	100	50	1850
165753	10	11	410	**172741**	150	69	2225
165754	15	21	595	**172742**	200	102	3290
165756	25	27	790	.....	...	...	....

For Nominal 3300-Volt Circuits

APPLICATION.—By connection of the low-voltage leads outside the tank, transformers are arranged for series, multiple or 3-wire service, with the exception of sizes 150 and 200 kv-a., which are suitable for series and 3-wire service only.

SERVICE.—Suitable for outdoor and indoor installation.

SUSPENSION HOOKS.—Hooks are provided with, and included in weight of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Rating: 3300 to 122/244

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals	Ship. Wt. Lbs. Incl. Oil
79162	1.5	3¼	155	**198404**	37.5	32	1075
79165	3	4	195	**79175**	50	40	1340
79167	5	6	295	**78972**	75	54	1715
79168	7.5	9	335	**78973**	100	50	1880
79169	10	11	410	**172732**	150	69	2245
79170	15	21	590	**172733**	200	102	3300
79172	25	27	800	.....	...	...	....

For Nominal 4000-Volt Circuits

These transformers are to provide service where it is more economical or desirable to connect transformers across phases than between line and neutral on 2300–4000-volt Y circuits. The use of these transformers give the same service voltages as 10:1 ratio transformers connected between line and neutral.

APPLICATION.—Transformers listed below are also suitable for operation as follows:

High Voltage Rating—4330/4114/3898

Low Voltage Rating—125/250

By connection of low-voltage leads outside the tank, transformers are arranged for series, multiple or 3-wire service.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Hooks are provided with, and included in weight of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Rating: 4160/3052/3744 to 120/240

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X115	1.5	3½	150	**47X122**	37.5	33	1055
47X116	3	4½	180	**47X123**	50	41	1370
47X117	5	6	260	**47X124**	75	54	1715
47X118	7.5	9	380	**47X125**	100	50	1880
47X119	10	11	410	**47X126**	150	69	2285
47X120	15	21	595	**47X127**	200	103	3300
47X121	25	27	790	.....	...	...	....

G-E Type H Distribution Transformers

Single-Phase, 60 Cycles, Self-Cooled

For Nominal 2300-4000Y-4600 and 8000Y-Volt Circuits

APPLICATION.—Transformers listed in Line 1 below are also suitable for operation as follows:

High Voltage Rating—2500/5000/8660Y

Low Voltage Rating—125/250

By connection of low-voltage leads outside the tank, transformers are arranged for series, multiple or 3-wire service. Transformers having low voltage rating 240/480 are suitable for series and multiple service only.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Hooks are provided with all sizes up to 100 kv-a., inclusive. Transformers weights include suspension hooks up to 100 kv-a., inclusive.

High voltage windings of sizes 150 and 200 kv-a. have taps for 2280/2160/4560/4320.

Name Plate Voltage Rating:
Line No. 1—2400/4800/8320Y to 120/240
Line No. 2—2400/4800/8320Y to 240/480

Line No. 1 Cat. No.	Line No. 2 Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Line No. 1 Cat. No.	Line No. 2 Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X128	47X144	1.5	5¼	175	47X135	47X151	37.5	33	1095
47X129	47X145	3	4½	185	47X136	47X152	50	41	1375
47X130	47X146	5	8½	285	47X137	47X153	75	54	1715
47X131	47X147	7.5	9	335	47X138	47X154	100	50	1880
47X132	47X148	10	11	405	47X139	47X155	150	69	2275
47X133	47X149	15	21	590	47X140	47X156	200	103	3300
47X134	47X150	25	27	790	.....	.....	.....	.....	.....

For Nominal 2200, 3810Y, 4400 and 7620Y-Volt Circuits

APPLICATION.—By connection of low-voltage leads outside the tank, transformers are arranged for series, multiple or 3-wire service, with the exception of 150 and 200 kv-a. which are suitable for series and 3-wire service only.

SERVICE.—For outdoor or indoor installation.

SUSPENSION HOOKS.—Hooks are provided with, and included in weight of all sizes up to 100 kv-a., inclusive.

Name Plate Voltage Rating: 2200/4400/7620Y to 122/244

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55°C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
224952	1.5	5¼	175	**198390**	37.5	33	1085
195639	3	4½	185	**79917**	50	41	1360
195640	5	8½	285	**79918**	75	54	1715
79910	7.5	9	335	**79919**	100	50	1880
79911	10	11	405	**172726**	150	69	2295
79912	15	21	590	**172727**	200	102	3300
79914	25	27	790	.....	...	...	....

For Nominal 6600 and 11000Y-Volt Circuits

APPLICATION.—For operation on 6600-volt circuits and for supplying service voltages 600 and below. Transformers listed below are also suitable for operation as follows:

High Voltage Rating—7200/12470Y/6875/6545/6220* to

Low Voltage Rating—120/240, 240/480 or 600

By connection of low-voltage leads outside the tank, transformers having low voltage rating of 115/230 are arranged for series, multiple or 3-wire service. Transformers having low voltage rating of 230/460 are suitable for series and multiple service only. For indoor or outdoor use.

SUSPENSION HOOKS.—Provided with, and included in the weight of all sizes up to 50 kv-a., inclusive.

Name Plate Voltage Rating:
Line No. 1—6900/11950Y/6585/6275/5960* to 115/230
Line No. 2—6900/11950Y/6585/6275/5960* to 230/460
Line No. 3—6900/11950Y/6585/6275/5960* to 575

Line No. 1 Cat. No.	Line No. 2 Cat. No.	Line No. 3 Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Approx. Ship. Wt. Lbs. Incl. Oil
47X176	47X192	47X208	1.5	5	220
47X177	47X193	47X209	3	7½	310
47X178	47X194	47X210	5	8	335
47X179	47X195	47X211	7.5	9½	390
47X180	47X196	47X212	10	8	435
47X181	47X197	47X213	15	16	705
47X182	47X198	47X214	25	31	1025
47X183	47X199	47X215	37.5	30	1195
47X184	47X200	47X216	50	37	1470
47X185	47X201	47X217	75	50	1965
47X186	47X202	47X218	100	48	2100
47X187	47X203	47X219	150	70	2645
47X188	47X204	47X220	200	150	4240

*Taps for 5960 and 6220 volts are for reduced capacity.

G-E Type H Distribution Transformers

Single-Phase, 60 Cycles, Self-Cooled
For Nominal 6600 and 11000Y-Volt Circuits

APPLICATION.—For operation on 6600-volt circuits and for supplying 2300 or 4000-volt distribution and motors.

Transformers having voltage rating of 6600/11430Y to 2300 are, when operated in bank, suitable for transforming from 6600 to 2300; from 6600 to 4000Y or from 11430Y to 2300. They should not be used connected in Y on both high- and low-voltage sides simultaneously to transform from 11430Y to 4000Y as this connection may result in the presence of excessive stresses in the windings due to harmonic voltages.

SERVICE.—All sizes are suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Suspension hooks are provided with and included in the weight of all sizes up to 50 kv-a., inclusive.

Name Plate Voltage Rating:
6600/11430Y/6270 5940 to 2300

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X224	5	8	330	47X230	50	37	1470
47X225	7.5	9½	385	47X231	75	50	1915
47X226	10	8¼	445	47X232	100	48	2050
47X227	15	16	695	47X233	150	70	2620
47X228	25	31	1025	47X234	200	150	4130
47X229	37.5	30	1170	.....	...	...	....

For Nominal 11000-Volt Circuits

APPLICATION.—For 11000-volt circuits and for supplying service voltages 600 and below. Transformers of these name plate ratings are also suitable for operation as follows:

High Voltage Rating—12000/11400/10800 to
Low Voltage Rating—120/240, 240/480 or 600

By connection of low-voltage leads outside the tank, transformers having low-voltage rating of 115/230 are arranged for series, multiple or 3-wire service. Transformers having low voltage rating of 230/460 are suitable for series and multiple service only.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Provided with and included in weight of all sizes up to 50 kv-a., inclusive.

Name Plate Voltage Rating:
Line No. 1—11500/10925/10350 to 115/230
Line No. 2—11500/10925/10350 to 230/460
Line No. 3—11500/10925/10350 to 575

Line No. 1 Cat. No.	Line No. 2 Cat. No.	Line No. 3 Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Approx. Ship. Wt. Lbs. Incl. Oil
47X238	47X252	47X266	2.5	7½	305
47X239	47X253	47X267	5	8	335
47X240	47X254	47X268	10	8	450
47X241	47X255	47X269	15	16	690
47X242	47X256	47X270	25	31	1025
47X243	47X257	47X271	37.5	30	1170
47X244	47X258	47X272	50	37	1480
47X245	47X259	47X273	75	50	1930
47X246	47X260	47X274	100	48	2100
47X247	47X261	47X275	150	70	2630
47X248	47X262	47X276	200	150	4210

For Nominal 11000-Volt Circuits

APPLICATION.—For operation on 11000-volt circuits and for supplying 2300 or 4000 volt distribution and motors.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Suspension hooks are provided with all sizes up to 50 kv-a. inclusive. Transformer weights include suspension hooks up to 50 kv-a. inclusive.

Name Plate Voltage Rating:
11000/10450/9900 to 2300/4000Y

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X280	5	8	330	47X285	50	37	1435
47X281	10	8¼	445	47X286	75	50	1925
47X282	15	16	685	47X287	100	48	2070
47X283	25	31	990	47X288	150	70	2620
47X284	37.5	30	1140	47X289	200	150	4130

G-E Type H Distribution Transformers

Single-Phase, 60 Cycles, Self-Cooled
For Nominal 13200-Volt Circuits

APPLICATION.—For 13200-volt circuits and for supplying service voltages 600 and below. Transformers in Line 1 are also suitable for operation as follows:

High Voltage Rating—13750/13060/12375 to
Low Voltage Rating—125/250

By connection of low-voltage leads outside the tank, transformers having low-voltage rating of 120/240 are arranged for series, multiple or 3-wire service. Transformers having low-voltage rating of 240/480 are suitable for series and multiple service only.

SERVICE.—Suitable for outdoor or indoor installations.

SUSPENSION HOOKS.—Provided with and included in weights of all sizes up to 50 kv-a., inclusive.

Name Plate Voltage Rating:
Line No. 1—13200/12540/11880 to 120/240
Line No. 2—13200/12540/11880 to 240/480
Line No. 3—13200/12540/11880 to 600

Line No. 1 Cat. No.	Line No. 2 Cat. No.	Line No. 3 Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Approx. Ship. Wt. Lbs. Incl. Oil
47X293	47X307	47X321	2.5	7½	305
47X294	47X308	47X322	5	8	330
47X295	47X309	47X323	10	8¼	425
47X296	47X310	47X324	15	16	690
47X297	47X311	47X325	25	31	1020
47X298	47X312	47X326	37.5	30	1160
47X299	47X313	47X327	50	37	1480
47X300	47X314	47X328	75	50	1915
47X301	47X315	47X329	100	48	2090
47X302	47X316	47X330	150	.70	2645
47X303	47X317	47X331	200	150	4345

For Nominal 13200-Volt Circuits

APPLICATION.—For operation on 13200-volt circuits and for supply 2400 or 4160Y-volt distribution and motors.

SERVICE.—For outdoor or indoor installation.

SUSPENSION HOOKS.—Suspension hooks are provided with all sizes up to 50 kv-a., inclusive. Transformer weights include suspension hooks up to 50 kv-a., inclusive.

Name Plate Voltage Rating:
13200/12540/11880 to 2400/4160Y

Cat. No.	Kv-a. Cont. 55 °C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X335	5	8	325	47X340	50	37	1460
47X336	10	8¼	420	47X341	75	50	1905
47X337	15	16	680	47X342	100	48	2060
47X338	25	31	1005	47X343	150	70	2610
47X339	37.5	30	1150	47X344	200	150	4155

For Nominal 22000-Volt Circuits

APPLICATION.—For operation on 22000-volt circuits and for supplying service voltages 600 and below. By connection of low-voltage leads outside the tank, transformers having low-voltage rating of 120/240 are arranged for series, multiple or 3-wire service. Transformers having low-voltage rating of 240/480 are suitable for series and multiple service only.

SERVICE.—Suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Not provided with these transformers.

Name Plate Voltage Rating:
22000/20900/19800 to 120/240

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X349	10	44	1100	47X354	75	90	2560
47X350	15	41	1165	47X355	100	99	2950
47X351	25	51	1480	47X356	150	144	3780
47X352	37.5	57	1705	47X357	200	143	4200
47X353	50	55	1845	.....	...	...	....

G-E Type HT Distribution Transformers

3-Phase, 60 Cycles, Self-Cooled

APPLICATION.—Terminal board is provided on the low-voltage side for either series or multiple connection.

SERVICE.—All sizes are suitable for outdoor or indoor installation.

SUSPENSION HOOKS.—Suspension hooks are provided with all sizes up to 50 kv-a. inclusive, for voltage ratings 13800 and below.

BRACKETS.—Brackets for supporting the high-voltage leads are regularly furnished with all sizes up to 50 kv-a. inclusive, for voltage 13800 and below.

For Nominal 2300 and 4000Y-Volt Circuits

Name Plate Voltage Rating:
*High Voltage Rating—2400/4160Y to
Low Voltage Rating—240/480

Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil	Cat. No.	Kv-a. Cont. 55° C. Rise	Oil Req. Gals.	Ship. Wt. Lbs. Incl. Oil
47X524	10	13	735	47X529	75	50	2125
47X525	15	24	995	47X530	100	60	2765
47X526	25	36	1285	47X531	150	63	3440
47X527	37.5	42	1620	47X533	200	101	4220
47X528	50	54	1955	.....	...	...	....

For Nominal 4600-Volt Circuits

Name Plate Voltage Rating:
High Voltage Rating—4800Y/4560Y/4320Y to
Low Voltage Rating—240/480

47X547	10	13	735	47X552	75	50	2125
47X548	15	24½	985	47X553	100	60	2745
47X549	25	36½	1270	47X554	150	64	3415
47X550	37.5	42	1610	47X555	200	102	4200
47X551	50	53	1955	.....	...	...	....

For Nominal 6600-Volt Circuits

Name Plate Voltage Rating:
High Voltage Low Voltage
6900Y/6555Y/6210Y to 230/460
7200Y/6840Y/6480Y to 240/480

47X569	10	25	970	47X574	75	66	2530
47X570	15	39	1195	47X575	100	79	2985
47X571	25	47½	1455	47X576	150	107	3975
47X572	37.5	57	1880	47X577	200	121	4490
47X573	50	56	2020	.....	...	...	....

For Nominal 11000-Volt Circuits

Name Plate Voltage Rating:
High Voltage Rating—11500Y/10925Y/10350Y to
Low Voltage Rating—230/460

47X602	10	26	975	47X607	75	68	2610
47X603	15	40	1205	47X608	100	80	2970
47X604	25	48	1450	47X609	150	109	3930
47X605	37.5	57	1855	47X610	200	121	4460
47X606	50	57	2010	.....	...	...	....

For Nominal 13200-Volt Circuits

Name Plate Voltage Rating:
High Voltage Rating—13200Y/12540Y/11880Y to
Low Voltage Rating—240/480

47X635	15	40	1205	47X639	75	68	2600
47X636	25	48	1430	47X640	100	81	2965
47X637	37.5	58	1850	47X641	150	110	3920
47X638	50	57	1990	47X642	200	122	4430

For Nominal 22000-Volt Circuits

Name Plate Voltage Rating:
High Voltage Rating—22000Y/20900Y/19800Y to
Low Voltage Rating—240/480

47X666	37.5	167	2970	47X669	100	162	3570
47X667	50	163	3070	47X670	150	171	3850
47X668	75	163	3390	47X671	200	173	4520

For Nominal 33000-Volt Circuits

Name Plate Voltage Rating:
High Voltage Rating—33000Y/31350Y/29700Y to
Low Voltage Rating—240/480

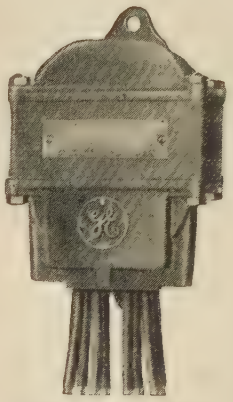
47X692	50	206	3780	47X695	150	223	4680
47X693	75	200	4040	47X696	200	223	5330
47X694	100	221	4410	.....	...	...	....

*High voltage winding on size 200 kv-a. has taps for 2280/2160.

G-E Air-Cooled Transformers

Type M—For Indoor and Outdoor Service

Type D—For Indoor Service Only



Type M Transformer

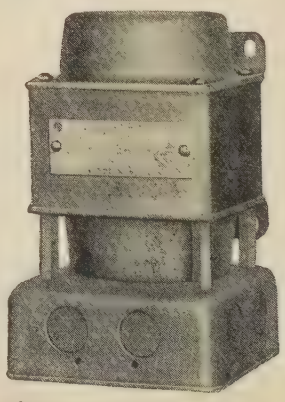
G-E Air-Cooled Transformers have a wide range of applications on circuits 600 volts and below. Such applications include supplying the proper voltage for special lamps, tools, bells, buzzers, airport lights, brazing, welding, testing and industrial heating equipment. They are also used for insulating circuits to promote safety, operating lights and portable tools from power circuits, boosting voltage, phase changing and many other unusual applications.

In transformers rated 10 kv-a. and below, as well as auto-transformers of equivalent physical size, the Type M construction is used. It forms a solid, compact unit which dissipates heat from its external surfaces by radiation. In the larger sizes, the Type D, natural-draft construction is used. The transformer is effectively cooled by air currents which enter ventilating holes in the housing and circulate around the core and coils.

Type D Transformer

These transformers are built in standard ratings up to 50 kv-a. and 600 volts, 60 cycles. Special transformers, up to 200 kv-a. for 60-cycle circuits, are built from an extensive line of standardized parts, economically and for quick delivery. They are applicable to circuits of 600 volts and below.

Type M transformers, with the exception of the larger sign-lighting and boosting transformers, may be adapted to enclosed wiring installations through the addition of a junction box directly over the leads and bushing. The junction box can readily be attached to units already installed as well as to new transformers.



Small Type M Transformer with Junction Box

The 90-degree junction boxes can be provided for Type D transformers. These facilitate conduit connections, as they can be mounted on the cover plate in four different positions. The use of this box is optional with standard Type D single-phase units, as conduit may be run directly into the side plates. However in phase-changing and special units, the leads of which are brought through the cover, these junction boxes must be used for conduit connection. In all Type D transformers, separate boxes are required for primary and secondary leads.

G-E Transformers Used as Auto-Transformers for Boosting Voltage

Air Cooled, Single or 3-Phase, 60 Cycles

Transformers for sign lighting are extensively used for boosting single or 3-phase circuits by connecting them as auto-transformers. They are particularly adapted for boosting the 3-phase voltage of a secondary network system.

As they can be connected in series or in multiple, a 5, 10 or 20 per cent boost is possible as shown in the tabulation below. Because of the small voltage change required in such applications, the output of these small transformers is exceedingly large in comparison with their physical size.

The kv-a. output of one single-phase unit, connected as an auto-transformer, is one-third of the bank output.

Unit Kv-a. of Transformer	Kv-a. Bank Output—3 Units Y Connected as Auto-Transformers—When Connected for These Ratios: 199Y to 220Y	199Y to 239Y	398Y to 420Y	398Y to 440Y
.100	3.3	1.8	6.3	3.3
.250	8.25	4.5	15.75	8.25
.500	16.5	9	31.7	16.5
.750	24.75	13.5	47.25	24.75
1	33	18	63	33
1.5	49.5	27	94.5	49.5
2	66	36	126	66
3	99	54	189	99
5	165	90	315	165

3-Phase Y-Connected Auto-Transformers
Type M—For Indoor or Outdoor Service

The Y-connected auto-transformers listed below are designed primarily to boost the voltage of a 3-phase secondary network system. They give the desired voltage at the minimum cost. Because of the small physical size as compared to the kv-a. output of the bank, an installation very compact and neat in appearance is obtained.

Auto-transformers of the ratings listed consist of three units with three leads brought out of each unit. In banks with a rated output of 50 kv-a. and below, the three units are mounted side by side on a metal plate. The larger banks consist of three separate units to be individually mounted.

Although the 208 to 230-volt transformation is most common, a great many special ratios are required such as 199 to 230 volts, or 208 to 230 and 240 volts. Auto-transformers of all these special ratios can be furnished quickly and economically as the same parts and construction are used as on the listed ratings.

Care should be exercised in ordering auto-transformers that the installation will meet local electrical inspector's requirements.

Because of the heavy secondary leads and complications in connections, standard junction boxes are not recommended. When enclosed wiring is desired, a modified design can be furnished.

Primary 199Y / 208Y Volts—Secondary 220Y / 230Y Volts

3 Units Mounted Side by Side on Metal Plate

Cat. No.	Each	Kv-a. Output Cont. 55° C. Rise	Depth Inches	Wall Space Inches	Approx. Ship. Wt. Lbs.
9AM632A	$58.00	1	3½	12⅞x 4⅛	22
9AM633A	71.00	2	3½	12⅞x 4⅜	25
9AM634A	80.00	3	3½	12⅞x 4¾	28
9AM635A	89.00	5	3½	12⅞x 5⅝	36
9AM636A	97.00	7.5	4⅜	17 x 9½	62
9AM637A	106.00	10	4⅜	17 x10	70
9AM638A	119.00	15	4⅜	17 x10⅞	85
9AM639A	145.00	25	5⅛	19 x12¼	120
9AM640A	175.00	37.5	5⅛	19 x13⅜	140
9AM641A	200.00	50	5⅞	22 x12½	200

3 Separate Units to be Individually Mounted

Weight and dimensions of individual units; 3 furnished.

Cat. No.	Each	Kv-a. Output Cont. 55° C. Rise	Depth Inches	Wall Space Inches	Approx. Ship. Wt. Lbs.
9AM642A	$250.00	75	6	7⅝x13½	85
9AM643A	310.00	100	6	7⅝x15	105
9AM644A	411.00	150	7⅝	9⅝x22½	175
9AM645A	502.00	200	7⅝	9⅝x24	200
9AM646A	598.00	250	7⅝	9⅝x26½	250
9AM647A	704.00	300	10⅝	11¾x23	350

G-E Transformers and Auto-Transformers for Phase Changing

Air-Cooled, 3 to 2, or 2 to 3-Phase, 50 or 60 Cycles

Type M—For Indoor or Outdoor Service
Type D—For Indoor Service Only

Phase-changing transformers and auto-transformers are primarily of use when a phase change is made on a distribution system. They permit the economical use of motors and other polyphase equipment which would otherwise become obsolete.

The two lines of auto-transformers are not interchangeable and it is necessary to determine whether the 2-phase circuit is 3-wire or 4-wire in order to select the proper unit. These auto-transformers cannot be used on a 4-wire circuit having the mid-points of the two phases connected together. For this application, the 2-winding transformer is recommended, although especially designed auto-transformers can be furnished.

Type M Transformers

3-Phase 220/230/240 Volts—2-Phase 220/230/240 Volts 3 or 4-Wire

Cat. No.	Each	Kv-a. Output Cont. 55 C. Rise	Depth Inches	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TM855A	$105.00	1	4½	5½x16⅞	60	22X646 or 22X647
9TM856A	150.00	3	5⅛	6½x23¾	110	22X646 or 22X647
9TM857A	200.00	5	6	7⅝x26⅞	185	22X646 or 22X647
9TM858A	256.00	7.5	7	8⅞x29⅝	235	22X646 or 22X647
9TM859A	315.00	10	7	8⅞x32⅛	280	22X646 or 22X647
9TM860A	425.00	15	7⅝	9⅝x32⅜	335	5012696G1

Type D Transformers

3-Phase 220/230/240 Volts—2-Phase 220/230/240 Volts 3 or 4-Wire

Cat. No.	Each	Kv-a. Output	Depth Inches	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TD211A	610.00	25	†26¼	‡15¾x32	675	Use two 2105286
9TD212A	775.00	37.5	†26¼	‡16½x33	850	Use two 2105286
9TD213A	925.00	50	†26¼	‡17½x35¾	1050	Use two 2105286

Type M Auto-Transformers for 2-Phase 4-Wire

3-Phase 220/230/240 Volts—2-Phase 220/230/240 Volts 4-Wire

Cat. No.	Each	Kv-a. Output	Depth Inches	Wall Space Inches	*Junction Box Cat. No.
9AM813A	$70.00	1	3⅜	3⅝x 9⅛	22X648 or 22X649
9AM814A	90.00	3	3⅞	4⅞x15	22X648 or 22X649
9AM815A	106.00	5	4½	5½x15¾	22X648 or 22X649
9AM816A	120.00	7.5	4½	5½x18⅛	22X648 or 22X649
9AM817A	135.00	10	5⅛	6½x19½	22X648 or 22X649
9AM818A	155.00	15	5⅛	6½x22	5012696G2
9AM819A	205.00	25	6	7⅝x25½	5012696G2
9AM820A	265.00	37.5	7	8⅞x29¼	5012696G2
9AM821A	325.00	50	7⅝	9⅝x28⅞	5012696G2

**Type M Auto-Transformers for 2-Phase 3-Wire

3-Phase 220/230/240 Volts—2-Phase 220/230/240 Volts 3-Wire

Cat. No.	Each	Kv-a. Output	Depth Inches	Wall Space Inches	*Junction Box Cat. No.
9AM822A	$74.00	1	3⅜	3⅝x11½	22X648 or 22X649
9AM823A	98.00	3	3⅞	4⅞x16⅜	22X648 or 22X649
9AM824A	114.00	5	4½	5½x14¾	22X648 or 22X649
9AM825A	132.00	7.5	5⅛	6½x19½	22X648 or 22X649
9AM826A	146.00	10	5⅛	6½x22	22X648 or 22X649
9AM827A	180.00	15	6	7⅝x23¼	5012696G2
9AM828A	245.00	25	7	8⅞x27¼	5012696G2
9AM829A	325.00	37.5	7⅝	9⅝x27⅝	5012696G2
9AM830A	400.00	50	7⅝	9⅝x30⅞	5012696G2

*Not included in price or weight of transformer.

**Care should be exercised in ordering auto-transformers that the installation will meet local electrical inspector's requirements.

†Height. ‡Floor space.

Standard Junction Boxes for Types M and D Transformers

Cat. No.	Each	Conduit Size, In.	Dimensions Inches	Ship. Wt. Lbs.
4255645G1	$2.00	½	4 x4 x1⅝	1⅝
4255645G2	2.00	½	4 x4 x1⅝	1½
22X646	2.00	¾	4¾x4¾x2⅛	2⅝
22X647	2.00	1	4¾x4¾x2⅛	2⅝
22X648	2.00	¾	4¾x4¾x2⅛	2½
22X649	2.00	1	4¾x4¾x2⅛	2½
5012696G1	2.00	1 & 1¼	4¾x4¾x2¼	2⅝
5012696G2	2.00	1 & 1¼	4¾x4¾x2¼	2½
2105285	2.00	1½	5⅜x4⅞x4¾	3¾
2105286	2.00	2	6½x5¾x5⅜	4¾

Wall Brackets for Type D Transformers

For mounting single-phase Type D transformers.

For Transformer Cat. No.	Wall Hanger Cat. No.	Each	Ship. Wt. Lbs.
9TD29B	4255370G1	$5.00	7
9TD30B	4255370G2	5.00	8
9TD31B	4255370G3	5.00	9
9TD32B	4255370G4	5.00	9½

G-E Type M Service Transformers

To Supply or Insulate 115 or 230-Volt Circuits

Air-Cooled, Single-Phase, 60 Cycles

For Indoor or Outdoor Service

For Oil Well, Mine and Pump-House Service

These transformers are designed especially to be used at the end of long lines such as are generally used to supply oil well, mine and pump-house service. Because of the wide voltage variation likely to be encountered at such locations, these transformers are designed to operate satisfactorily from 440 to 525 volts and may be used on either a 50 or 60-cycle circuit. The secondary voltages will vary accordingly. They are arranged to be connected directly into a conduit system and are supplied with ¾-inch pipe nipples and 12-inch leads as shown in illustration.

Primary 440/525 Volts—Secondary 110/131 Volts

Cat. No.	Each	Kv-a. Output Cont. 55° C. Rise	Depth In.	Wall Space Inches	*Junction Box Cat. No.	Approx. Ship. Wt. Lbs.
9TM852A	$27.00	.100	3⅞	4⅞x11	Conduit	17
9TM853A	31.00	.250	3⅞	4⅞x12¼	Connection	23
9TM854A	42.00	.500	4½	5½x10⅞	Only	35

*Supplied with ¾-inch pipe nipple.

These transformers are also suitable for 50-cycle operation.

For General Light and Power Service

These transformers are designed to reduce the voltage of 230, 460 or 575-volt power circuits to either 115 or 230 volts for supplying lights and other equipment. Some of the ratings are also suitable for insulating one circuit from another without change in voltage. In addition to the many single-phase applications, they can be used in banks on poly-phase circuits.

The classification "service" is applied to transformers used to supply a standard utilization voltage from another standard utilization voltage.

G-E Service Transformers

To Supply or Insulate 115 or 230-Volt Circuits

Air-Cooled, Single-Phase, 60 Cycles

Type M—For Indoor or Outdoor Service
For General Light and Power Service

Primary 220; 230; 240 Volts—Secondary 110; 115; 120 Volts

Cat. No.	Each	Kv-a. Output Cont. 55°C. Rise	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TM810A	$15.	.050	3⅜	3⅝x 3⅞	6	
9TM811A	16.	.075	3⅜	3⅝x 4⅛	7	4255645G1
9TM812A	17.	.100	3⅜	3⅝x 4⅜	9	
9TM813A	19.	.150	3⅜	3⅝x 5	10½	
9TM814A	23.	.250	3⅞	4⅞x 8⅛	20	22X646
9TM815A	32.	.500	3⅞	4⅞x9¾	27	or
9TM816A	41.	.750	4½	5½x10⅜	33	22X647

Primary 110/220; 115/230; 120/240 Volts—Secondary 110/220; 115/230; 120/240 Volts

Cat. No.	Each	Kv-a.	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TM817A	$50.	1	4½	5½x11⅜	40	
9TM818A	61.	1.5	5⅛	6½x12½	55	22X646
9TM819A	72.	2	5⅛	6½x13⅞	70	or
9TM820A	93.	3	6	7⅝x15¼	105	22X647
9TM821A	135.	5	7	8⅞x17¾	145	
9TM822A	187.	7.5	7⅝	9⅝x18½	200	
9TM823A	240.	10	10⅝	11¾x21⅛	300	5012696G1

Primary 440; 460; 480 Volts—Secondary 110; 115; 120 Volts

Cat. No.	Each	Kv-a.	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TM824A	$15.	.050	3⅜	3⅝x 3⅞	6	
9TM825A	16.	.075	3⅜	3⅝x 4⅛	7	4255645G1
9TM826A	17.	.100	3⅜	3⅝x 4⅜	9	
9TM827A	19.	.150	3⅜	3⅝x 5	10½	
9TM828A	23.	.250	3⅞	4⅞x 8⅛	20	22X646
9TM829A	32.	.500	3⅞	4⅞x9¾	27	or
9TM830A	41.	.750	4½	5½x10⅜	33	22X647

Primary 220/440; 230/460; 240/480 Volts—Secondary 110/220; 115/230; 120/240 Volts

Cat. No.	Each	Kv-a.	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TM831A	$50.	1	4½	5½x11⅜	40	
9TM832A	61.	1.5	5⅛	6½x12½	52	22X646
9TM833A	72.	2	5⅛	6½x13⅞	70	or
9TM834A	93.	3	6	7⅝x15¼	105	22X647
9TM835A	135.	5	7	8⅞x17¾	145	
9TM836A	187.	7.5	7⅝	9⅝x18½	200	
9TM837A	240.	10	10⅝	11¾x21⅛	300	5012696G1

**†Type D—For Indoor Service Only

Primary 220/440; 230/460; 240/480 Volts—Secondary 110/220; 115/230; 120/240 Volts

Cat. No.	Each	Kv-a.	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TD29B	$345.	15	‡27¼	§18⅞x20¼	565	Use two
9TD30B	553.	25	‡27¼	§20⅝x21¾	750	2105285G1
9TD31B	750.	37.5	‡29¼	§23⅝x25	1085	Use one each
9TD32B	840.	50	‡29¼	§24⅝x26	1225	2105285G1 2105286G1

Type M—For Indoor or Outdoor Service

Primary 550; 575; 600 Volts—Secondary 110; 115; 120 Volts

Cat. No.	Each	Kv-a.	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TM838A	$16.	.050	3⅜	3⅝x 3⅞	6	
9TM839A	17.	.075	3⅜	3⅝x 4⅛	7	
9TM840A	18.	.100	3⅜	3⅝x 4⅜	9	4255645G1
9TM841A	20.	.150	3⅜	3⅝x 5	10½	
9TM842A	24.	.250	3⅞	4⅞x 8⅛	20	22X646
9TM843A	34.	.500	3⅞	4⅞x9¾	27	or
9TM844A	44.	.750	4½	5½x10⅜	33	22X647

Primary 550; 575; 600 Volts—Secondary 110/220; 115/230; 120/240 Volts

Cat. No.	Each	Kv-a.	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No.
9TM845A	$55.	1	4½	5½x11⅜	40	
9TM846A	66.	1.5	5⅛	6½x12½	52	22X646
9TM847A	77.	2	5⅛	6½x14⅞	70	or
9TM848A	98.	3	6	7⅝x15¼	105	22X647
9TM849A	141.	5	7	8⅞x17¾	147	
9TM850A	195.	7.5	7⅝	9⅝x18½	200	
9TM851A	248.	10	10⅝	11¾x21⅛	300	5012696G1

*Not included in price or weight of transformer.
**Can be wall mounted by using wall hangers. Prices and weights given above do not include these hangers.
†Suitable for 50-cycle operation.
‡Height. §Floor space.

G-E Type M Service Auto-Transformers

To Supply 115 and 230-Volt Circuits
For Indoor or Outdoor Service
For General Light and Power Service

Primary 220, 230, 230 Volts—Secondary 110, 115, 120 2-Wire or 220/110, 230/115, 240/120 3-Wire Volts

Air-Cooled, Single-Phase, 60 Cycles

Auto-transformers are more economical and smaller than a transformer designed to carry the same load. Within their voltage limitations, they will perform the same function as service transformers with the exception of insulating two circuits. They may be used to obtain 115 volts from a 230-volt circuit, to derive a neutral on a 230-volt 2-wire circuit, or to balance a 115/230-volt 3-wire circuit. They also may be used in banks on polyphase circuits.

Care should be exercised in ordering auto-transformers that the installation will meet local electrical inspector's requirements.

Cat. No.	Each	Kv-a. Output Cont. 55° C. Rise	Depth Inches	Wall Space Inches	Approx. Ship. Wt. Lbs.
*9AM801A	$18.00	.250	3⅜	3⅝x 4½	10
*9AM802A	23.00	.500	3⅜	3⅝x 5⅞	13
†9AM803A	28.00	.750	3⅞	4⅞x 8¾	23
†9AM804A	32.00	1	3⅞	4⅞x 9⅞	28
†9AM805A	40.00	1.5	4½	5½x 9⅞	32
†9AM806A	50.00	2	4½	5½x10⅜	40
†9AM807A	62.00	3	5⅛	6½x12⅜	52
‡9AM808A	87.00	5	6	7⅝x13½	90
‡9AM809A	115.00	7.5	7	8⅞x15⅞	125
‡9AM810A	140.00	10	7	8⅞x17⅝	145
‡9AM811A	192.00	15	7⅝	9⅝x18½	200
‡9AM812A	245.00	20	10⅝	11¾x19⅞	300

Junction box not included in price or weight of transformer: *No. 4255645G2; †Nos. 22X648 or 22X649; ‡No. 5012696G2.

G-E Type M Air-Cooled Transformers

For 32-Volt Applications
For Indoor or Outdoor Service

Primary 110/220, 115/230, 120/240 Volts—Secondary 30.6, 32, 33.4 Volts

Single-Phase, 60 Cycles

These transformers derive 32-volt circuits from 115 or 230-volt lighting or power circuits; 32-volt portable lamps and portable tools are frequently used in mines, steel plants, meat packing plants and in damp locations to prevent injury in case of accidental grounding of the circuit through the operator's body. The 32-volt lamps are often more economical and have longer life than those rated at higher voltages.

These transformers can also be used as auto-transformers to boost the voltage of circuits. When so connected, the kv-a. output of each transformer will equal the kv-a. output listed below, multiplied by $\left(\frac{H.V.}{H.V.-L.V.}\right)$ and the kv-a. output of a 3-phase bank will be three times that of each unit.

Cat. No.	Each	Kv-a. Output Cont. 55° C. Rise	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No. When Used as Transformer	*Junction Box Cat. No. When Used as Auto-Transformer
9TM1290A	$19.	.100	3⅜	3⅝x 4⅜	9	4255645G1	4255645G2
9TM1291A	25.	.250	3⅞	4⅞x 8⅛	20		
9TM1260A	35.	.500	3⅞	4⅞x10	27	22X646	22X648
9TM1017A	44.	.750	4½	5½x10⅜	33	or	or
9TM1292A	52.	1	4½	5½x11⅜	40	22X647	22A649
9TM1147A	64.	1.5	5⅛	6½x12⅜	55	5012696G1	5012696G2
9TM1293A	75.	2	5⅛	6½x14⅜	70	Leads too heavy	
9TM1294A	96.	3	6	7⅝x15¼	105	for standard	
9TM1295A	138.	5	7	8⅞x17⅝	145	junction box.	

*Not included in prices or weights of transformers.

G-E Type M Sign-Lighting Transformers

For 11½ or 23-Volt Applications
For Indoor or Outdoor Service

Primary 110/220, 115/230, 120/240 Volts—Secondary 11/22, 11½/23, 12/24 Volts

Air-Cooled, Single Phase, 60 Cycles

Designed primarily for sign lighting. As these transformers are compact, light in weight, and weatherproof, they can be mounted in any convenient location such as the back of the sign.

These transformers have a wide range of application, as both the primary and secondary windings are arranged for series-multiple connections. They may be connected as a transformer with the secondary supplying 11½ or 23 volts, 2-wire or a 23/11½ volts, 3-wire; also as an auto-transformer to deliver 126½ or 138 volts from a 115-volt supply, or 241½ or 253 volts from a 230-volt supply. Two or more units may be used in various combinations to obtain many other special voltages.

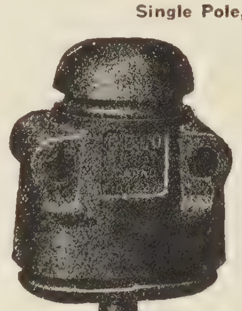
One of the many special applications is pipe thawing. Two transformers are used, the primaries being connected in multiple and the secondaries in series to give 46 volts. This gives sufficient capacity for thawing pipes up to 1-inch diameter. The current can be controlled to some extent by looping the secondary cables.

Cat. No.	Each	Kv-a Output Cont. 55° C. Rise	Depth In.	Wall Space Inches	Approx. Ship. Wt. Lbs.	*Junction Box Cat. No. When Used as Transformer	*Junction Box Cat. No. When Used as Auto-Transformer
9TM801A	$19.	.100	3⅜	3⅝x 4½	10	4255645G1	4255645G2
9TM802A	25.	.250	3⅞	4⅞x 8⅛	20		
9TM803A	35.	.500	3⅞	4⅞x10	29	22X646	22X648
9TM804A	44.	.750	4½	5½x10⅜	35	or	or
9TM805A	52.	1.	4½	5½x11⅛	40	22X647	22X649
9TM806A	64.	1.5	5⅛	6½x12½	53	5012696G1	5012696G2
9TM807A	75.	2	5⅛	6½x13⅞	70	Leads too heavy	
9TM808A	96.	3	6	7⅝x15¼	105	for standard	
9TM809A	138.	5	7	8⅞x16⅝	145	junction box.	

*Not included in prices or weights of transformers.

G-E Insulator Type Primary Cutouts

Single Pole, 30 Amperes, 2500 Volts

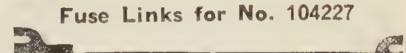


Cat. No. 104227 cutout is provided with spring catch contact with 2 binding screws.

Price, No. **104227**......each **$4.00**
Price, No. **246477**, Base ....each **2.50**
Price, No. **104577**, Plug Only................each **1.50**

Cat. No. 260276 combination safety plug puller and switch hook. Over all length, 42 inches.
Price, No. **260276**......each **$9.50**

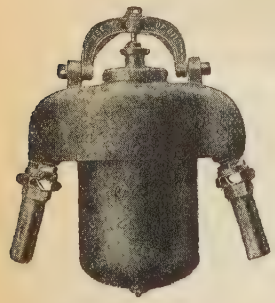
Fuse Links for No. 104227



Cat. No.	Amp.	Std. Pkg.	Price Each	Cat. No.	Amp.	Std. Pkg.	Price Each
259480	1	100	$.25	259485	15	100	$.25
259481	2	100	.25	259486	20	100	.25
259482	3	100	.25	259487	25	100	.25
259483	5	100	.25	259488	30	100	.25
259484	10	100	.25	......	..	...	...

GraybaR
QUALITY
Since 1869
Distributed and guaranteed by
GraybaR
ELECTRIC COMPANY

G-E D & W Type Oil Fuse Cutouts



Subway Type
100-200 Amperes

Used on distribution systems at tap-offs, sectionalizing points and outdoor installations of distribution transformers, constant current transformers, capacitors and industrial equipment such as hoists, etc. Used either indoor or outdoor; because of inverse-time blowing characteristics, afford best protection against short circuits for motors and control. These characteristics will assure the blowing of fuse link before destructive burning occurs in the copper of the motor or control. Should not be installed to give overload protection.

These cutouts are particularly advantageous for the following applications: where short-circuit currents are extremely heavy; where very high-speed operation is essential; all subway installations; where protection and switching are required for replacement of potheads; where quiet operation is desirable; where cutouts are exposed to smoke, corrosive fumes, salt air, explosive gases or inflammable dust; all indoor installations; where it is desired to have no exposed live parts, whether cutout is in the open or the closed position.

Pole Type
100-300 Amperes

Cutouts have the following operating advantages:

Safety in Fuse Link Renewal.—Fuse link is surrounded by a Textolite sleeve, which prevents mechanical damage or accidental electric contact, while carrier is being inserted in cutout. All live parts are enclosed. Fuse carrier is locked in place before circuit is closed.

Safety in Operation.—Flame from arc is confined within housing, thus preventing ignition of explosive gases and external damage.

Reliability.—Fuse link is under oil, which prevents deterioration from oxidation or electrolysis. Gases are released, but oil is confined. Subway fuse cutouts have operated for years while submerged in water.

Simplicity.—Fuse links are quickly and easily replaced. Oil level can be maintained without removing cutouts from service.

Opening Under Load.—Heavy, self-aligning contacts make possible repeated opening under load.

Wide Range of Protection Afforded.—Cutouts may be fused closely to load, providing simultaneously, protection against overload and heavy short circuits.

Pole Type

Cat. No.	Each	Volts	Rated Capacity Amperes	Interrupting Cap. Amps. at 60 Cycles Plain Links	Interrupting Cap. Amps. at 60 Cycles Reactive Links	Shipping Wt. Lbs. Cutout	Shipping Wt. Lbs. Oil
9F2A1	$48.00	2500	5 to 50	2000	....	51	6
9F2A2	58.00	2500	10 to 100	4000	5000	62	9
9F2A3	82.00	2500	10 to 200	8000	10000	113	21
		5000	10 to 100	4000	5000		
9F2A4	178.00	2500	100 to 300	8000	10000	205	31
9F2A5	178.00	7500	10 to 100	3000	3750	200	31

Subway Type

9F2A6	$75.00	2500	5 to 50	2000	....	61	6
9F2A7	85.00	2500	10 to 100	4000	5000	70	9
9F2A8	110.00	2500	10 to 200	8000	10000	127	21
		5000	10 to 100	4000	5000		
*9F2A15	250.00	2500	100 to 300	8000	10000	200	26
*9F2A9	250.00	7500	10 to 100	3000	3750	200	26

*The bushings on Cat. No. 9F2A9 and 9F2A15 cutouts are not the separable-sleeve type but are designed for connection to the cables using standard splicing material.

The 2500-volt cutouts are suitable for operation on 4000-volt Y-connected circuits with dead grounded neutral. In all cases two cutouts are required between lines.

G-E Fuse Links

For D & W Type Oil Fuse Cutouts

Plain Type

A carton consists of 10 links.

Rated Capacity of Links Amperes	Catalogue Numbers of Cutouts				
	9F2A1	9F2A2	9F2A3	9F2A4	9F2A5
	9F2A6	9F2A7	9F2A8	9F2A15	9F2A9
		9F2A10	9F2A12		
		9F2A11	9F2A13		
	4X101	4X108	†4X104	4X105	4X106
	4X110	4X121	†4X122	230008	4X123
	230002	230000	230001		230009
	246103	230003	230004	For	230010
	230005	246104	246105	2500	
	230011	230006	†230007	volts	
	230014	230012	†230013	only	
		246107	†246108		
	Catalogue Numbers of Fuse Links				
5	295544	.....	.....	.....	.....
10	295545	295552	295561	.....	295571
15	295546	295553	.....	.....	295572
20	295547	.....	.....	.....	.....
25	295548	295554	295562	.....	295573
30	295549	295555	.....	.....	.....
40	295550	295556	295563	.....	295574
50	295551	295557	295564	No smaller	295575
60	No larger	295558	.....	link made	.....
75	link made	295559	295565	for this	295576
100	for these	295560	295566	cutout	295577
125	cutouts	No larger	295567	295578	No larger
150	.....	link made	295568	295579	link made
175	.....	for these	295569	295580	for these
200	.....	cutouts	295570	295581	cutouts
250	.....	.....	No larger link	295582	.....
300	.....	.....	made for these	295583	.....
			cutouts		.....
	Shipping Weight Carton, Pounds				
	1	2	3	4	2
	Price, Each—Up to 100 Amperes				
	$.80	$.95	$1.15	$1.45	$1.45
	Price, Each—Over 100 Amperes				
	....	....	$1.70	$2.00	....

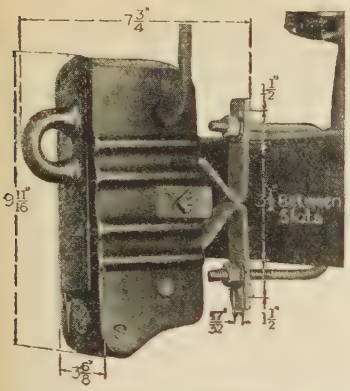
Reactive Type

Rated Capacity of Links Amperes	Catalogue Numbers of Cutouts				
	9F2A2	‡9F2A3	‡9F2A3	9F2A4	9F2A5
	9F2A7	‡9F2A8	‡9F2A8	9F2A15	9F2A9
	9F2A10	‡9F2A12	‡9F2A12		
	9F2A11	‡2F2A13	‡9F2A13		
	4X108	‡4X104	‡4X104	4X105	4X106
	4X121	‡4X122	‡4X122	230008	4X123
	230000	230001	‡230007		230009
	230006	‡230007	‡230013	For	
	230003	230004	‡246108	2500	
	246104	246105		volts	
	230012	‡230013		only	
	246107	‡246108			
	Catalogue Numbers of Fuse Links				
10	295584	295591	295601	.....	295615
15	295585	.....	.....	.....	.....
25	295586	295592	295602	.....	295616
30	.....	.....	.....	.....	295617
40	295587	295593	.....	No smaller	.....
50	295588	295594	295603	link made	295618
75	295589	295595	295604	for this	295619
100	295590	295596	295605	cutout	295620
125	No larger	295597	No larger	295609	No larger
150	link made	295598	link made	295610	link made
175	for these	295599	for these	295611	for these
200	cutouts	295600	cutouts	295612	cutouts
250	.....	No larger link	.....	295613	.....
300	.....	made for these	.....	295614	.....
		cutouts			.....
	Shipping Weight, Carton, Pounds				
	3	4	4	6	4
	Price, Each—Up to 100 Amperes				
	$3.50	$3.50	$3.50	$3.50	$3.50
	Price, Each—Over 100 Amperes				
	.....	$3.80	.....	$3.80	....

†The plain type links for 100 amperes and below listed for these cutouts will operate satisfactorily on 5000 volts.

‡When these cutouts are used on 5000-volt circuits where reactive type fuse links are required, use links Cat. Nos. 295601 to 295605. Links Cat. Nos. 295591 to 295600 are only good for 2500-volt circuits.

G-E Expulsion Type Distribution Fuse Cutouts



Cat. No. 6X2433

The design of these cutouts embodies the following features:

SAFETY.—Fuse holder is removed from circuit when door is opened—door closes upward, protecting lineman should cutout be closed on a short circuit—door can be opened or closed by a switch hook; cutout hangs low on the crossarm.

RELIABILITY.—Expulsion principle of operation — gases are expelled outside housing — interlocking barriers prevent conducting gas from short-circuiting terminals—high interrupting capacity. Heavy clips insure good contact and prevent overheating.

SIMPLICITY.—Cutouts are suitable for right or left-hand entrance leads. Link holder can be removed and replaced with one hand; cannot be replaced upside down. Hanger adjustable for 2¾ to 4-inch crossarm.

DURABILITY.—Glazed porcelain housing with molded compound door and galvanized hanger.

60 Amperes, 0 to 5000 Volts

Interrupting Capacity, 1500 Amperes at 60 Cycles

Cat. No. 6X2433 is a primary cutout complete with link holder in porcelain box. Arranged for both right and left hand entrance. No fuse links.

Cat. No. **6X2433**.....each **$10.80**
Cat. No. **9F4A3**, Link Holders.....each **3.40**
Cat. No. **29X843**, Disconnecting Blade.....each **1.40**

Low Temperature Fuse Links for Cat. No. 6X2433 Cutouts

Cat. No.	Cap. Amps.	Each	Cat. No.	Cap. Amps.	Each	Cat. No.	Cap. Amps.	Each
9F1A127	1	$.50	**9F1A131**	10	$.50	**9F1A85**	30	$.50
9F1A128	2	.50	**9F1A132**	15	.50	**9F1A86**	40	.50
9F1A129	3	.50	**9F1A133**	20	.50	**9F1A87**	50	.50
9F1A130	5	.50	**9F1A84**	25	.50	**9F1A88**	60	.50

60 Amperes, 0 to 7500/12500 Grounded Y Volts

Cat. No. 6X242 cutout is suitable for right or left hand entrance. With link holder enclosed in porcelain box.

Cat. No. **6X242**.....each **$17.80**
Cat. No. **9F4A2**, Link Holder.....each **3.40**
Cat. No. **29X842**, Disconnecting Blade.....each **1.40**

Low Temperature Fuse Links for Cat. No. 6X242 Cutouts

Cat. No.	Cap. Amps.	Each	Cat. No.	Cap. Amps.	Each	Cat. No.	Cap. Amps.	Each
9F1A127	1	$.50	**9F1A131**	10	$.50	**9F1A90**	30	$.50
9F1A128	2	.50	**9F1A132**	15	.50	**9F1A91**	40	.50
9F1A129	3	.50	**9F1A133**	20	.50	**9F1A92**	50	.50
9F1A130	5	.50	**9F1A89**	25	.50	**9F1A93**	60	.50

150 Amperes, 0 to 5000 Volts

Interrupting Capacity 3000 Amperes at 60 Cycles

Cat. No. 6X241 primary cutout is furnished complete with link holder in porcelain box. Arranged for both right and left hand entrance. No fuse links.

Cat. No. **6X241**.....each **$28.00**
Cat. No. **9F4A1**, Link Holder.....each **6.00**
Cat. No. **29X841**, Disconnecting Blade.....each **3.00**

150 Amperes, 0 to 7500/12500 Grounded Y Volts

Interrupting Capacity 3000 Amperes at 60 Cycles

Cat. No. 6X240 primary cutout is furnished complete with link holder in porcelain box. Arranged for both right and left-hand entrance. No fuse links.

Cat. No. **6X240**.....each **$34.00**
Cat. No. **9F4A1**, Link Holder.....each **6.00**
Cat. No. **29X841**, Disconnecting Blade.....each **3.00**

Low Temperature Fuse Links for Cat. Nos. 6X241 and 6X240 Cutouts

Cat. No.	Cap. Amps.	Each	Cat. No.	Cap. Amps.	Each	Cat. No.	Cap. Amps.	Each
9F1A112	1	$.50	**9F1A117**	20	$.50	**9F1A17**	60	$.50
9F1A113	3	.50	**9F1A13**	25	.50	**9F1A18**	75	.60
9F1A114	5	.50	**9F1A14**	30	.50	**9F1A19**	100	.60
9F1A115	10	.50	**9F1A15**	40	.50	**9F1A20**	125	.60
9F1A116	15	.50	**9F1A16**	50	.50	**9F1A21**	150	.60

G-E Transformer Fuse Cutouts

Tables for Selecting Proper Fuse Cutouts

Cutouts are so chosen that full-load current of transformer will never exceed 65% of fuse link rating for expulsion cutouts, and 75% of rating for oil-filled cutouts. It is imperative that the maximum short-circuit current at the point of installation shall not exceed the interrupting rating of the cutout. When two or more cutouts of the same type are shown, they all meet the voltage and current requirements but have different interrupting-capacity ratings. See cutout listing for these ratings.

Table I—Distribution Fuse Cutouts for Single-Phase Transformer Installations (Except Subway)

The cutouts given for Y ratings can be used only when the neutral is grounded.

Transformer Kv-a.	Type of Cutout	Cat Nos. — Rated Voltage of Transformer — 2400/4160Y	4800 Delta	8320 Y	6900 Delta	11950 Y	7620/13200 Y	11500 or 13200 Delta
75 and Less	Encl.	6X2433 6X241	6X2433 6X241	6X242 6X241	6X242 6X240	6X242 6X240	.....	.....
	Open	9F3B5	9F3B5	9F3B1 9F3B3	9F3B1 9F3B3	9F3B1 9F3B3	9F3B2 9F3B4	9F3B2 9F3B4
	Oil	9F2A1 9F2A2 9F2A3	9F2A3	9F2A5	9F2A5	.....	.....	.....
100 and 150	Encl.	6X241	6X2433 6X241	6X242 6X241	6X242 6X240	6X242 6X240	.....	.....
	Open	9F3B5	9F3B5	9F3B1 9F3B3	9F3B1 9F3B3	9F3B1 9F3B3	9F3B2 9F3B4	9F3B2 9F3B4
	Oil	9F2A2 9F2A3	9F2A3	9F2A5	9F2A5	.....	.....	.....
200 and 250	Encl.	6X241	6X241	6X241	6X242 6X240	6X242 6X240	.....	.....
	Open	.....	9F3B5	9F3B3	9F3B1 9F3B3	9F3B1 9F3B3	9F3B2 9F3B4	9F3B2 9F3B4
	Oil	9F2A3	9F2A3	9F2A5	9F2A5	.....	.....	.....
333	Encl.	.....	6X241	6X241	6X240	6X240	.....	.....
	Open	.....	.....	.....	9F3B3	9F3B3	9F3B4	9F3B4
	Oil	9F2A3	9F2A3	9F2A5	9F2A5	.....	.....	.....
500	Encl.	.....	.....	6X241	6X240	6X240	.....	.....
	Open	.....	.....	.....	.....	.....	9F3B4	9F3B4
	Oil	9F2A4	.....	9F2A5	9F2A5	.....	.....	.....

Table II—Distribution Fuse Cutouts for 3-Phase Transformers and Banks of 3 Single-Phase Transformers (Except Subway)

Transformer Bank Kv-a.	Type of Cutout	Cat Nos. — Rated Voltage of Transformer Between 3-Phase Terminals 2400	4160	4800	6600 and 6900	8320 Y	11000 Y and 11950 Y	13200
150 and Less	Encl.	6X2433 6X241	6X2433 6X241	6X2433 6X241	6X242 6X240	6X242 6X240	6X242 6X240	.....
	Open	9F3B5	9F3B5	9F3B5	9F3B1 9F3B3	9F3B1 9F3B3	9F3B1 9F3B3	9F3B2 9F3B4
	Oil	9F2A1 9F2A2 9F2A3	9F2A1 9F2A2	9F2A3	9F2A5	.....	.....	.....
200 and 225	Encl.	6X241	6X2433 6X241	6X2433 6X241	6X242 6X240	6X242 6X240	6X242 6X240	.....
	Open	9F3B5	9F3B5	9F3B5	9F3B1 9F3B3	9F3B1 9F3B3	9F3B1 9F3B3	9F3B2 9F3B4
	Oil	9F2A2 9F2A3	9F2A2	9F2A3	9F2A5	.....	.....	.....
300	Encl.	6X241	6X241	6X241	6X242 6X240	6X242 6X240	6X242 6X240	.....
	Open	.....	9F3B5	9F3B5	9F3B1 9F3B3	9F3B1 9F3B3	9F3B1 9F3B3	9F3B2 9F3B4
	Oil	9F2A2 9F2A3	9F2A2 9F2A3	9F2A3	9F2A5	.....	.....	.....
450 and 600	Encl.	.....	6X241	6X241	6X240	6X240	6X242 6X240	.....
	Open	.....	.....	.....	9F3B3	9F3B3	9F3B1 9F3B3	9F3B2 9F3B4
	Oil	9F2A3	9F2A3	9F2A3	9F2A5	.....	.....	.....
750	Encl.	.....	.....	6X241	6X240	6X240	6X240	.....
	Open	.....	.....	.....	9F3B3	9F3B3	9F3B3	9F3B2 9F3B4
	Oil	9F2A4	9F2A3	.....	9F2A5	.....	.....	.....
1000	Encl.	.....	.....	6X241	6X240	6X240	6X240	.....
	Open	.....	.....	.....	.....	.....	9F3B3	9F3B4
	Oil	.....	9F2A3	.....	.....	.....	.....	.....

G-E Fuse Cutouts

Tables for Selecting Proper Fuse Cutouts

Continued

Table III—Oil Fuse Cutouts for Single-Phase Subway Transformer Installations

Transformer Kv.-a.	Type of Cutout	Cat. Nos. *Rated Voltage of Transformer 2400/4160Y	4800	6600 or 6900
75 and Less	Oil	9F2A6	9F2A8	9F2A9
100 and 150	Oil	9F2A7	9F2A8	9F2A9
200, 250, and 333	Oil	9F2A8	9F2A8	9F2A9
500	Oil	.....	.....	9F2A9

*The cutouts listed for 2400-volt transformers can be used on 4160-volt grounded Y circuits. The cutouts listed for 4800-volt and 6900-volt transformers cannot be used on 8320Y- or 11950Y-volt circuits.

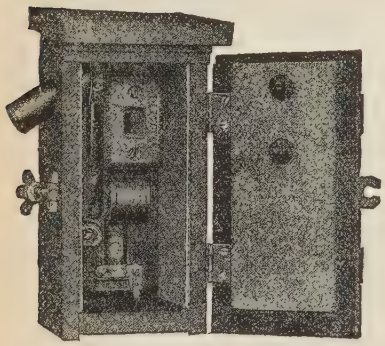
Table IV—Oil Fuse Cutouts for 3-Phase Subway Transformers and Banks of 3 Single-Phase Subway Transformers

Transformer Bank Kv.-a.	Type of Cutout	Cat. Nos. Rated Voltage of Transformer Between 3-Phase Terminals 2400	4160	4800	6600 or 6900
150 and Less	Oil	9F2A6	9F2A6	9F2A8	9F2A9
200 and 225	Oil	9F2A7	9F2A6	9F2A8	9F2A9
300	Oil	9F2A7	9F2A7	9F2A8	9F2A9
450	Oil	9F2A8	9F2A7	9F2A8	9F2A9
600	Oil	9F2A8	9F2A8	9F2A8	9F2A9
750	Oil	.....	9F2A8	.....	9F2A9
1000	Oil	.....	9F2A8	.....	.....

G-E Magnetic Blow-Out Lightning Arresters

For Electric Railway Circuits

MD-3, D.C.



For Indoor Service

Std. pkg., 12.
Ship. wt., 12 lbs.

Cat. No.	Circuit Voltage	Each
164403	0–350	$13.50
164405	350–750	13.50

For Outdoor Service

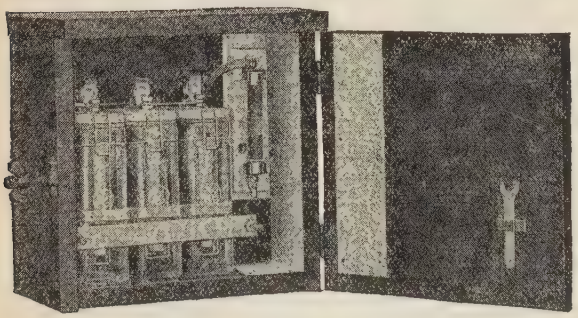
Std. pkg., 12.
Ship. wt., 20 lbs.

164404	0-350	$27.00
164406	350-750	27.00
2516587	350-750	33.00

Prices on arresters for voltages higher than 350–750 quoted on request.

No. 9LA7A11 G-E Aluminum Lightning Arresters

D.C.



Arresters should be installed on each car and at the stations and substations; on each feeder and each generator or synchronous converter.

Suitable for either indoor or outdoor installations. Mounted in a wooden box.

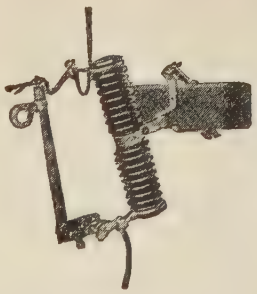
Circuit volts, 500–750. Standard package, 4.

Shipping weight, 45 pounds.

No. 9LA7A11.....each $50.00

Prices on arresters for voltages higher than 500–750, quoted on request.

G-E Open Type Fuse Cutouts with Drop-Out Fuse Holders



Cutout gives a positive indication that circuit is open whenever a fuse link is blown, by causing the fuse holder to drop to a horizontal position.

Fuse holder tube is weather-resistant and mechanically strong; will not warp or split. Can be easily replaced without renewing metal parts of fuse holder.

A cone on fuse holder cap maintains contact for sufficient time after fuse link melts to assure complete interruption of short circuit current within holder tube.

An automatic latch, incorporated in toggle mechanism, prevents fuse holder from falling out of support, curing the recoil resulting from expulsion action. A switch hook socket permits the use of any standard switch hook.

1-100 Amperes, 5000 Volts

Interrupting Capacity, 2000 Amperes at 60 Cycles
Flashover Values—Dry, 43 Kv.; Wet, 26 Kv.

Cat. No. 9F3B5, Cutout Complete with Fuse Holder, No Fuse Links.....each $14.20
Cat. No. 9F4B5, Fuse Holder.....each 7.00
Cat. No. 3974042, Holder Tube (No Metal Parts)each 2.00

1-60 Amperes, 7500/12500 Grounded Y Volts

Interrupting Capacity, 1200 Amperes at 60 Cycles
Flashover Values—Dry, 60 Kv.; Wet, 35 Kv.

Cat. No. 9F3B1, Cutout Complete with Fuse Holder and Hanger, No Fuse Links.....each $19.00
Cat. No. 9F4B1, Fuse Holder.....each 8.00
Cat. No. 3974012, Holder Tube (No Metal Parts)each 3.00

1-100 Amperes, 7500–12500 Grounded Y Volts

Interrupting Capacity, 2000 Amperes at 60 Cycles
Flashover Values—Dry, 60 Kv.; Wet, 35 Kv.

Cat. No. 9F3B3, Cutout Complete with Fuse Holder, No Fuse Links.....each $19.00
Cat. No. 9F4B3, Fuse Holder.....each 8.00
Cat. No. 3974020, Holder Tube (No Metal Parts)each 3.00

1-60 Amperes, 15000 Volts

Interrupting Capacity, 1200 Amperes at 60 Cycles
Flashover Values—Dry, 75 Kv.; Wet, 45 Kv.

Cat. No. 9F3B2, Cutout Complete with Fuse Holder and Hanger, No Fuse Links.....each $23.60
Cat. No.9F4B2, Fuse Holder.....each 9.00
Cat. No. 3974013, Holder Tube (No Metal Parts)each 4.00

1-100 Amperes, 15000 Volts

Interrupting Capacity, 2000 Amperes at 60 Cycles
Flashover Values—Dry, 75 Kv.; Wet, 45 Kv.

Cat. No. 9F3B4, Cutout Complete with Fuse Holder, No Fuse Links.....each $23.60
Cat. No. 9F4B4, Fuse Holder.....each 9.00
Cat. No. 3974021, Holder Tube (No Metal Parts)each 4.00

Cable-Type Tension Fuse Links

Cat. No.	Capacity Amperes	Each	Cat. No.	Capacity Amperes	Each
9F1C1	1	$.50	9F1C 8	25	$.50
9F1C2	2	.50	9F1C 9	30	.50
9F1C3	3	.50	9F1C10	40	.50
9F1C4	5	.50	9F1C11	50	.50
9F1C5	10	.50	9F1C12	60	.50
9F1C6	15	.50	9F1C13	75	.60
9F1C7	20	.50	9F1C14	100	.60

G-E Thyrite Lightning Arresters

Station Type—For Indoor or Outdoor Service

Cat. No. 9LA1D8

Single-Pole Units

Thyrite, the active element of the Thyrite arrester, has no time lag, has definite characteristics that remain unchanged in use, acting as a virtual insulator at low voltage, but a good conductor at high voltages. For the first time, accurate predictions can be made of arrester performance under various operating conditions.

Thyrite arresters can be installed indoors or outdoors on any voltage. They are built of self-contained units, each having the necessary gap structure and Thyrite elements enclosed in a wet process porcelain container, sealed at each end by heat-treated aluminum castings. Small size, economical, simple and easy assembly, result from the interchangeable unit system used.

The following information applies to single-pole arresters; for 3-phase circuits, use three single-pole arresters.

Arresters rated 73 kv. and below are suitable for application up to 6000 feet altitude.

For Ungrounded-Neutral Circuits

Cat. No.	Each	Rated Circuit Voltage	Rated Arrester Voltage	Maximum Arrester Voltage	Approx. Ship. Wt. Lbs.
9LA1D5	$120.00	2300	**1000	†3000	115
9LA1D6	146.00	4600	**3000	6000	120
9LA1D7	180.00	6900	**6000	9000	135
9LA1D25	297.00	11500 / 13800	**9000	15000	280
9LA1D26	323.00	.....	18000	20000	285
9LA1D27	388.00	23000	23000	25000	305
9LA1D28	500.00	.....	28500	30000	410
9LA1D29	565.00	34500	34500	37000	430
9LA1D30	742.00	46000	46000	50000	555
9LA1D31	919.00	.....	57500	60000	680
9LA1D32	1096.00	69000	69000	73000	805
9LA1D34	‡	115000	115000	121000	1425
9LA1D36	‡	138000	138000	145000	1700
		161000	161000	169000	

*For Grounded-Neutral Circuits

9LA1D5	$120.00	2300	**1000	†3000	115
9LA1D6	146.00	4600	**3000	6000	120
9LA1D7	180.00	6900	**6000	9000	135
9LA1D9	211.00	11500 / 13800	**9000	12000	180
9LA1D10	297.00	.....	18000	15000	280
9LA1D11	323.00	23000	23000	20000	285
9LA1D12	388.00	.....	28500	25000	305
9LA1D13	500.00	34500	34500	30000	410
9LA1D14	677.00	46000	46000	43000	535
9LA1D15	742.00	.....	57500	50000	555
9LA1D16	919.00	69000	69000	60000	680
9LA1D18	‡	115000	115000	97000	1175
9LA1D20	‡	138000	138000	121000	1425
9LA1D21	‡	161000	161000	145000	1700

*Use only when the system neutral is solidly grounded.

**Minimum voltage rating.

†Also suitable for 4100 grounded Y.

‡Prices on arresters above 73 kv. on application.

G-E Distribution Lightning Arresters

For Outdoor Service Only

Table 1—For Systems with Non-Grounded Neutral

Cat. No.	Each	*Circuit Voltage Constant Potential Min.	Max.	No. Arresters Req. at Installation Sgl. Ph.	3-Ph.	Std. Pkg.	Ship. Wt. Lbs. Ea. in Std. Pkg.
‡§2906822G1	$6.00	0	750	2	3	24	4
‡§2906823G1	12.00	0	750	1	.	12	7
‡§2906822G2	6.00	0	750	2	3	24	4
‡§2906823G2	12.00	0	750	1	.	12	7
9LA10A1	12.00	300	1000	1	3	12	10
9LA10A2	14.00	1000	3000	2	3	12	11
9LA10A4	26.00	3000	6000	2	3	12	18
9LA10A5	34.00	6000	9000	2	3	6	37
9LA10A6	46.00	9000	12000	2	3	6	37
9LA10A7	60.00	12000	15000	2	3	6	47
†9LA2C59	88.00	15000	20000	2	3	1	80
†9LA2C60	148.00	20000	25000	2	3	1	90
†9LA2C61	200.00	25000	30000	2	3	1	100
†9LA2C62	250.00	30000	37000	2	3	1	110
†2981437G4	400.00	37000	50000	2	3	1	510

Table 2—For Systems with Solidly Grounded Neutral

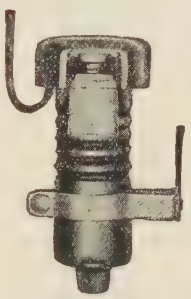
‡146187	$3.50	....	....	**	.	24	1.3
‡9LA11A1	5.50	....	....	**	.	24	4
9LA11A2	5.50	....	....	**	1	12	4
9LA10A2	14.00	3000	5000	**	3	12	11
9LA10A4	26.00	5000	9000	**	3	12	18
9LA10A5	34.00	9000	12800	**	3	6	30
9LA10A6	46.00	12800	15000	**	3	6	37
9LA10A7	60.00	15000	18000	**	3	6	40
9LA2C59	88.00	18000	25000	**	3	1	80
†9LA2C60	148.00	25000	30000	**	3	1	90
†9LA2C61	200.00	30000	37000	**	3	1	100
†9LA2C62	250.00	37000	50000	**	3	1	110

For 2-Phase Systems

Treat an installation on 2-phase 4-wire systems like two single-phase installations on an ungrounded-neutral 3-phase system. Recommendations on arresters for 2-phase 3-wire systems on request.

Table 3—For Protection of Load Side of A.C. Series Lighting Transformers

Cat. No. Single-Pole	Each	Kw. Rating of Transformers Secondary Amperes (6.6 and 7.5)	Std. Pkg.	Approx. Ship. Wt., Lbs. Std. Pkg.
‡2906822G2	$6.00	1, 2, 3,	24	4
9LA10A2	14.00	5, 7.5, 10, 15	12	11
9LA10A4	26.00	20, 25, 30	12	18
9LA10A5	34.00	35, 40	6	30
9LA10A6	46.00	50	6	37
9LA10A7	60.00	60, 70	6	40



Pellet Type

*Altitude: Arresters except Cat. Nos. 2981437G5 and 2981437G7 can be used at these ratings up to 6000 feet altitude, but when arrester Cat. No. 2981437G4 is to be used between 4000 and 6000 feet, the purchaser should state the approximate altitude at which it is to be installed so that it can be furnished with the correct gap setting. For altitudes above 6000 feet, the purchaser should obtain special recommendations for all arresters. Cat. Nos 2981437G5 and 2981437G7 can be used only up to 4000 feet.

**Use one arrester on outside wire at a single-phase transformer installation made between an outside wire and neutral. Use also on neutral wire Cat. Nos. 146187 or 9LA11A1, if voltage to ground is not over 300 volts; if, on account of unbalancing, voltage is between 300 and 1000 volts, use Cat. No. 9LA10A1. Use two arresters at a single-phase installation between outside wires. A system is considered solidly grounded when no resistance or reactance is used in grounding the neutral.

†Cat. No. of arrester does not include any form of mounting. Refer to Table 4.

‡Compression-chamber type, others are pellet type except those marked †, which are Thyritetype.

§These compression-chamber arresters are also suitable for grounded-neutral circuits of ratings up to 750 volts. The following table shows how they differ.

Cat. No.	Poles	Length Lead, Inches Line	Ground
2906822G1	Single	36	18
2906822G2	Single	18	18
2906823G1	Double	36	18
2906823G2	Double	18	18

Table 4—Mounting Devices for Thyrite Arresters

Rated 20, 25, 30 and 37 Kv.

Cat. Nos. 9LAC59 to 62 Inclusive

Cat. No. Mounting Device	3959936G1	3959936G2	3959936G4
Shipping Weight, pounds	10	40	12
Each	$12.00	20.00	No Charge

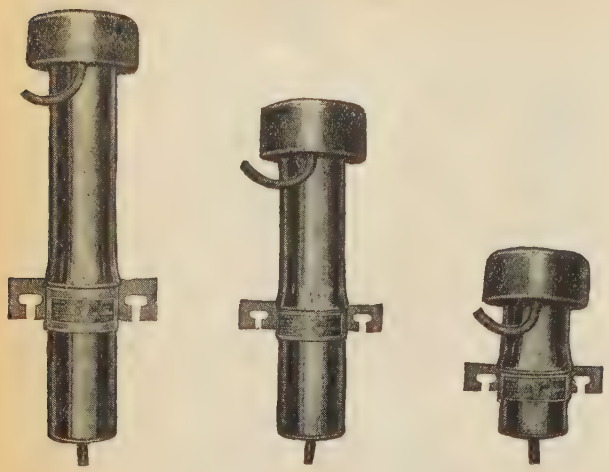
Table 5—Mounting Devices for 50-Kv. Pellet Arresters

Cat. No. 2981437G4

Cat. No. Mounting Device	2981434G2	1523295G2	2981429G1
Shipping Weight, pounds	14	12	145
Each	No Charge	No Charge	$32.00

Orders must specify catalogue number of mounting device required.

Crystal Valve A.C. Lightning Arresters



Typical Crystal Valve Arresters

Crystal Valve Lightning Arresters represent the latest development in the design of highly efficient lightning protective apparatus and are the result of some highly successful researches in the rectifying properties and value characteristics of refractory conducting crystals. They are characterized by the following important advantages:

Low initial or relief voltage for lightning disturbances.

High discharge rate due to low internal impedance.

They are of the true valve with all its attendant advantages.

Cathode Ray Oscillograph tests show that their speed of operation is exceedingly high.

Cathode Ray tests show time or speed characteristics are little affected by the steepness of the wave fronts.

Does not cause radio interference.

Bodies and caps are made from high grade wet process porcelain.

They suffer no measurable deterioration in service.

Their operating characteristics permit of their handling rapidly recurring discharges over long periods of time without danger of self destruction.

Their impedance decreases as the severity of the discharge increases.

They require no inspection other than a visual inspection.

They are small in size and a low first cost, permitting them to be installed directly on the transformer pole and used to protect small transformers as well as large.

Due to their operating characteristics they have an unusually long life.

Crystal Valve Arresters are regularly provided with line and ground leads of No. 6 B.& S. gauge stranded cable, 18 inches long and with hot galvanized strap hangers.

Voltage Ratings

No.	Type CV Form	Table One For Delta or Ungrounded Y 3-Phase Systems, Volts	Table Two For 3-Phase Y Systems with Solidly Grounded Neutral, Volts
50935	D	350–1000	.....
50925	1	1000–3000	.....
50927	3	1000–2000	3000–5000
50931	7	3000–6000	5000–9000
50932	8	6000–9000	9000–12800
50933	9	9000–12000	12800–15000
50934	10	12000–15000	15000–18000

Crystal Valve A.C. Lightning Arresters

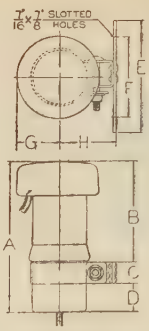


Fig. 1
Nos. 50935, 50925, 50927, 50931
With Type CA Mounting Bracket

All voltages specified are maximum phase-phase voltages.

For straight single-phase circuits use arresters recommended in Table 1.

Treat single-phase circuits split from 2-phase, and single and 2-phase circuits split from 3-phase circuits in accordance with the recommendations covering the particular type of circuit from which they are split.

For 2-phase 4-wire ungrounded circuits use arresters recommended in Table 1. For 2-phase 3-wire circuits with ungrounded neutral use arresters recommended in Table 1 for the phase wires; for the neutral wire use arresters rated at 71 per cent of the phase-phase voltage.

For the neutral wire of 3-phase 4-wire ungrounded Y circuits use arresters rated at 58 per cent of the phase-phase voltage.

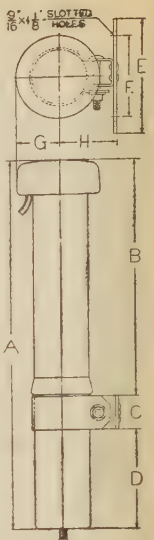


Fig. 2
Nos. 50932, 50933 and 50934
With Type DA Mounting Bracket

For neutral protection on either 2 or 3-phase circuits where the neutral is solidly grounded, use Types T-300, N or NS arresters. If, due to unbalancing, the voltage between neutral and ground is between 350 and 750 volts, use type CV form D arrester, listed below.

Form 11 arrester is designed for application to systems having phase to phase voltages of from 15,000 to 25,000; these include Delta systems, Y systems with solidly grounded neutral, and Y systems with ungrounded neutral. On a 4-wire ungrounded Y system form 11 arrester should be used on the phase wires while the form 10 arrester should be used on the neutral. On 4-wire Y systems with solidly grounded neutral, for neutral protection use Type T-300, N or NS arresters. If, due to unbalancing, the voltage between neutral and ground is above 350, use any of the listed Crystal Valve Arresters rated for the maximum voltage existing between neutral and ground.

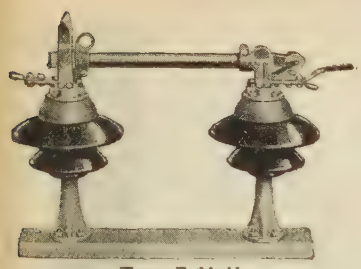
Dimensional Data

Cat. No.	Figs.	Dimensions, Inches A	B	C	D	E	F	G	H
50935	1	6	4 3/8	1 1/4	3/8	6 5/8	4 3/4	2 9/16	3 5/16
50925	1	9	6 1/8	1 1/4	1 5/8	6 5/8	4 3/4	2 9/16	3 5/16
50927	1	9	6 1/8	1 1/4	1 5/8	6 5/8	4 3/4	2 9/16	3 5/16
50931	1	16 1/8	10 1/4	1 1/4	4 5/8	6 5/8	4 3/4	2 9/16	3 5/16
50932	2	20 3/8	13 1/4	2	5 1/8	6 3/4	4 3/4	2 9/16	3 5/16
50933	2	26 1/2	17 1/2	2	7	6 3/4	4 3/4	2 9/16	3 5/16
50934	2	31 1/4	20	2	9 1/4	6 3/4	4 3/4	2 9/16	3 5/16

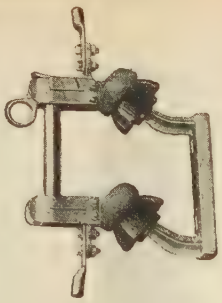
Prices

Cat. No.	Each	Type CV Form	Std. Pkg.
50935	$6.00	D	12
50925	7.00	1	12
50927	7.00	3	12
50931	13.00	7	12
50932	17.00	8	6
50933	23.00	9	6
50934	30.00	10	6
51001	80.00	11	1

Three E Outdoor Expulsion Fuse Disconnects



Type F. V. H.

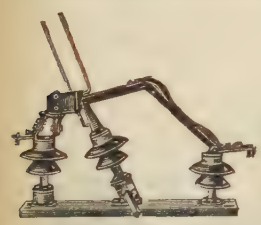


Type F. V. F.

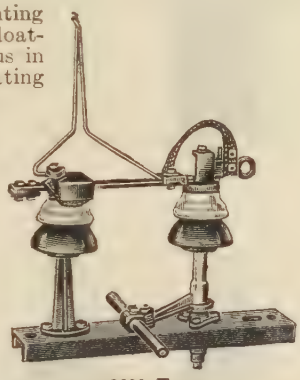
These fuse disconnects are equipped with hinges which enable operators to remove the fuse tube for re-filling. The fuse links are enclosed in live rubber tubing. On low capacities this tube confines the gases until sufficient pressure is created to expel the entire blown link and rubber tube. It also absorbs some of the mechanical shock caused by blowing on heavy short circuit. Obtainable from 7500 to 69,000-volt. Maximum rating, 100 amperes.

Three-E 6600 and 8600 Type Air Break Switches

These switches are easily installed under almost any mounting conditions. Contacts are full floating, self-aligning, and generous in design. Several types of operating mechanisms available. In voltages from 5000 to 69,000-volt, and from 200 to 4000 amperes.

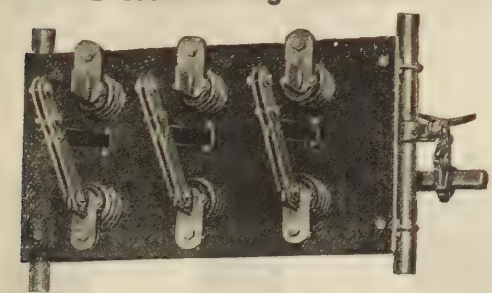


8600 Type



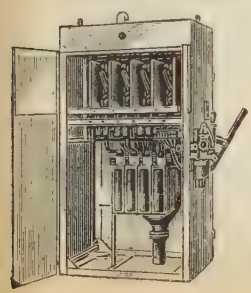
6600 Type

Three-E Indoor Type Gang Operated Disconnecting Switches



The construction is the same as the single pole switches. Any combination of front and back connection can be obtained. Operating handles are available for any operating or mounting conditions. A complete line of accessories, such as insulating barriers, etc. can be furnished.

Three-E Metal Enclosed Switching and Fuse Cabinets



Metal enclosed cabinets can be installed economically and operated safely on industrial power supply installations. The space required is much less than open type bus work.

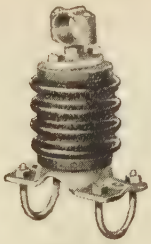
All cabinets are designed so that the equipment is readily accessible for alteration or inspection.

Ask for Bulletin Giving Complete Information

Three-E Form A-1 Indoor Bus Supports

For Round Busses

Type RF



Type RP

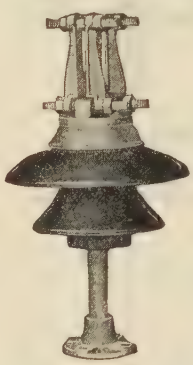
Type LF

Type LP

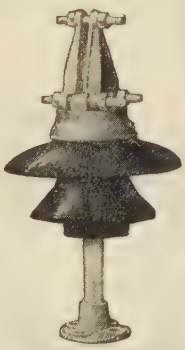
Type FF

Type FP

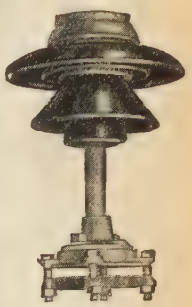
Three-E Outdoor Bus Supports



Type HFU



Type AFU



Type MFH

Type TFU

Type RFU

Type FFU

Three-E Outdoor Bus Supports are of interchangeable construction. The illustrations are for flat mounting and are designated as Type FU. For pipe mounting, the letter P should be substituted for the letter F.

These bus supports can be used on either a.c. or d.c. service. They are available for voltages from 7500 to 69,000.

A complete line of accessories, such as mounting and adjustable top adapters, is available.

Ask for Bulletin Giving Complete Information

Three-E Indoor Type Disconnecting Switches

The double blade type of construction is used throughout, giving the advantages of low temperature rise, self-aligning contacts, etc. The clips are cast copper.

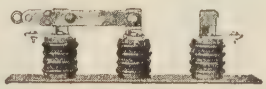
Built for voltages from 110 to 34,500 and ampere capacity from 100 to 5,000.

Switches can be supplied in all combinations of front and back connection, of the single throw, double throw, and transfer types with or without blade locks, for flat or pipe mounting on steel, slate, marble, ebony asbestos and alberene stone.

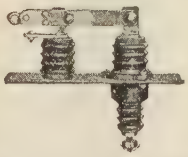
Insulating barriers, blade stops, and terminals can be supplied for all switches.

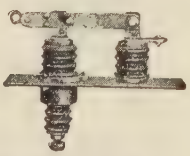
Single Throw and Double Throw Types

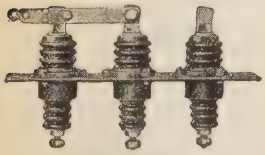
Type W-1

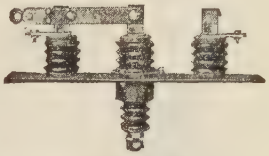

Type W-2

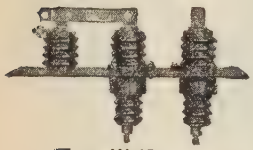
Type W-5

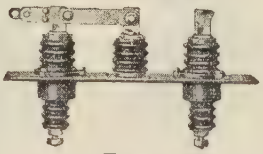

Type W-6

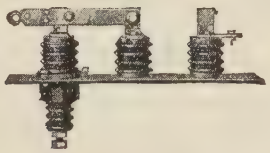

Type W-7


Type W-25


Type W-26

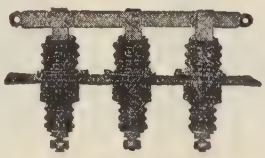

Type W-27

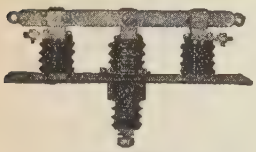

Type W-28


Type W-29

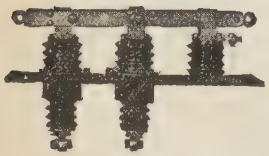
Transfer Types

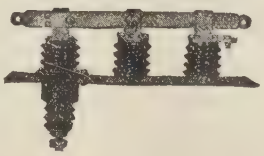
Type W-30


Type W-31


Type W-32

Type W-33


Type W-34


Type W-35

Ask for Bulletin Giving Complete Information

Three-E Form A-1 Indoor Bus Supports

For Flat Vertical Bus Bar

Type HF

All bus supports illustrated are the Form A-1. Heavy pressed steel mounting bases are used on this form of bus support.

These supports are available for voltages from 5000 to 34,500 and the cantilever strength at insulator cap. of 6000 inch pounds.

Indoor bus supports are also furnished in what is known as Form A. This form uses heavy cast malleable bases.

Type HP

Type AF

Type AP

Type KF

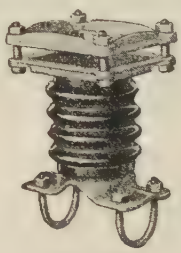
Type KP

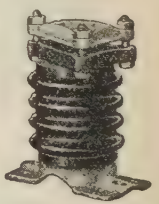
Type GF

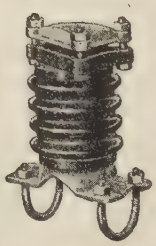
Type GP

For Flat Horizontal Bus Bar

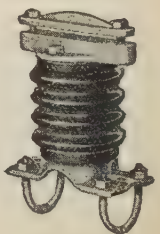
Type MF


Type MP


Type BF

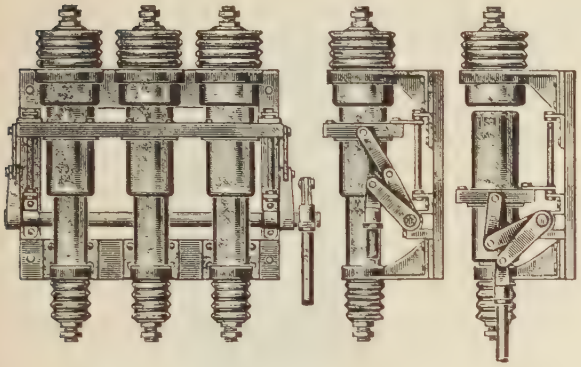

Type BP

Type TF


Type TP

Ask for Bulletin Giving Complete Information

Three-E Gang Operated Telescoping Isolators



This device is known as porcelain clad and was designed principally for economy and safety. The isolator uses less space than any other disconnecting device of the same capacity.

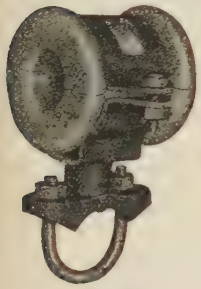
All live parts are completely enclosed in porcelain, both in the open and closed positions. This feature minimizes electrical accidents to operators and workmen.

The isolator can be mounted vertically or horizontally.

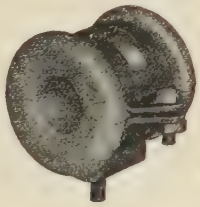
Available in voltages of 7500, 15,000, and 23,000 volts and for 600, 1200, and 2000 amperes.

Ask for Bulletin Giving Complete Information

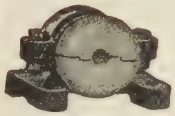
Three-E Clamp Insulator Supports



Type CIL
Pipe Mounting



Type CIL
Flat Mounting

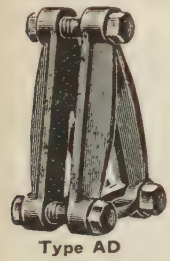


Type MIL
Flat Mounting

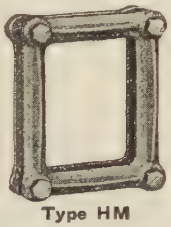
Consists of porcelain spools held by metal clamps. The lower half is made of heavy pressed steel and the top half of heavy pressed non-ferrous metal. Also available with a heavy cast malleable base instead of pressed steel.

Can be used on either a.c. or d.c. service. Available for conductor sizes ranging from 5/16 to 3½ inches.

Three-E Bus Clamps



Type AD



Type HM

Type HD

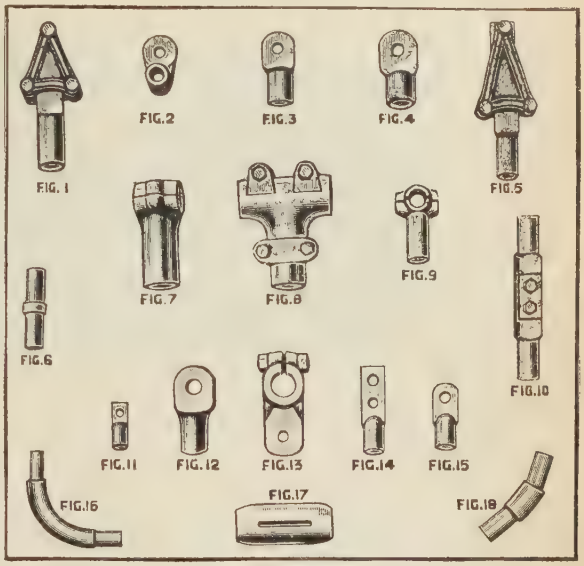
Type AM

The Three-E line of bus clamps is complete in every respect. Clamps can be supplied for all commercial size bars.

The illustrations show a medium duty Type H and Type A, and a heavy duty Type H and Type A Clamp.

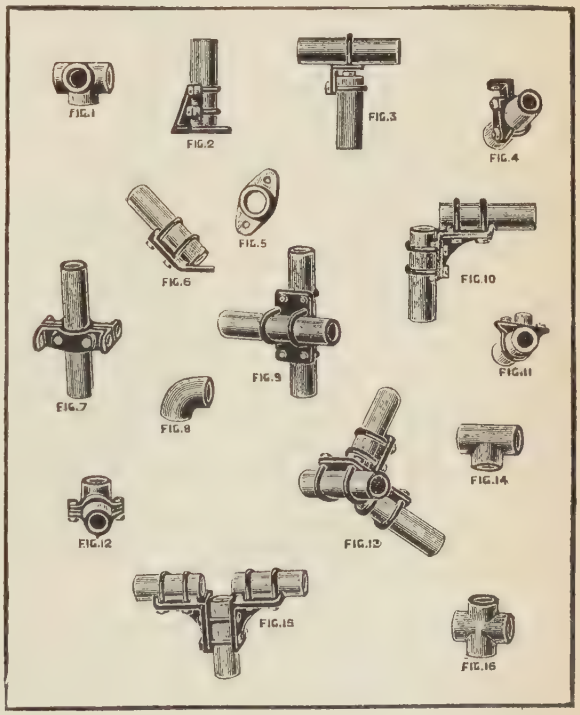
Three-E Electrical Copper Fittings

For Wire, Cable, Rod, Tubing and Bar



The above illustrations show but a small portion of the Three-E line of conductor fittings. Fittings can be supplied for any size or kind of conductor.

Three-E Iron Pipe Fittings

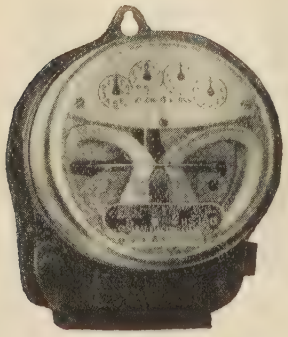


The above illustrations show but a small portion of the Three-E line of pipe fittings. Fittings can be supplied for the commercial pipe sizes in all manner of shapes to meet most any condition.

Ask for Bulletin Giving Complete Information

G-E Type I-16 Watthour Meters

Single-Phase, 60 Cycles



Designed for residential or commercial service. For high torque large overload capacity; excellent overload accuracy, no tendency to creep.

A single iron casing forms the base, the housing for motor element and the support for damping magnets, bearings and register.

Furnished with glass cover and special sealing arrangement. All parts readily accessible when back plate is removed.

Amperes	115-120 Volts, 2-Wire Cat. No.	Each	230-240 Volts, 2-Wire Cat. No.	Each
5	2X798	$16.65	2X808	$18.65
10	2X799	17.60	2X809	19.60
15	2X800	18.60	2X810	20.80
25	2X801	24.50	2X811	27.25
50	2X802	35.50	2X812	38.50
100	29X129	45.00	29X131	48.00
	230-240 Volts, 3-Wire (4-Terminal)		230-240 Volts, 3-Wire (6-Terminal)	
5	9X434	$18.65	10X170	$18.65
10	9X435	19.60	10X171	19.60
15	9X436	20.80	10X172	20.80
25	9X437	27.25	10X173	27.25
50	16X653	38.50	16X655	38.50

Meters for Use with Instrument Transformers

For Use with Current and Potential Transformers
Secondary Rating, 5 Amperes, 115 Volts

Cat. No. 10X208 ..... each $21.00

For Use with Current Transformers
Secondary Rating, 5 Amperes

‡Cat. No.	Each	Circuit Rating	Meter
31X436	$21.00	115-120 Volts, 2-Wire	2-Wire
†10X209	23.00	230-240 Volts, 2-Wire	2-Wire
10X210	23.00	230-240 Volts, 3-Wire	*3-Wire

Meters can be supplied with top bearing detent to prevent negative registration for $1.00 net extra.

*This is a 6-terminal meter with a 3-wire winding intended for use with 2 separate current transformers on a 3-wire circuit.

†3-wire, single-phase circuits can be metered with the 2-wire meter Cat. No. 10X209 when connected with double-primary, single-secondary, 3-wire type of current transformer.

‡Cat. Nos. of meters do not include transformers and the order should state the ratio of the transformers with which they will be used that they may be calibrated and furnished with suitable register to read directly the primary energy. When meters are to be suitable for use with instrument transformers but not rated nor equipped with direct-reading registers for any particular transformer combination, order should so state.

Meters may be used on circuits the voltage of which may be 10% above or below the minimum rated voltage of the meter. When ordering meters for voltages outside of these limits, specify the normal operating voltage.

G-E Type D-14 Polyphase Watthour Meters

2-Element, 60 Cycles

A single iron casting constitutes the base and frame and provides a rigid mounting for the parts as well as a housing for the elements. Parts are readily accessible. The one-piece terminal block is removable by removing two screws, and includes 8 current terminals and 7 potential and demand terminals.

Glass cover fits against cork gasket.

If wanted for circuits having voltage more than 10% above or below the minimum rated voltages below, specify the normal operating voltage; otherwise order by catalog number.

Cat. Nos. 3-Ph., 3-W. 2-Ph., 3-W. Circuits	Cat. Nos. 2-Phase 4-Wire Circuit	Each	Amps.	Cat. Nos. 3-Ph., 3-W. 2-Ph., 3-W. Circuits	Cat. Nos. 2-Phase 4-Wire Circuit	Each	Amps.
115-120 Volts							
28X223	28X263	$54.00	5	28X226	28X266	$65.00	25
28X224	28X264	58.00	10	28X227	28X267	73.00	50
28X225	28X265	61.00	15	.....	.....	.....	..
230-240 Volts							
28X228	28X268	$60.00	5	28X231	28X271	$71.00	25
28X229	28X269	64.00	10	28X232	28X272	79.00	50
28X230	28X270	67.00	15	.....	.....	.....	..
460-480 Volts							
28X233	28X273	$74.00	5	28X236	28X276	$85.00	25
28X234	28X274	78.00	10	28X237	28X277	93.00	50
28X235	28X275	81.00	15	.....	.....	.....	..
575-600 Volts							
28X238	28X278	$74.00	5	28X241	28X281	$85.00	25
28X239	28X279	78.00	10	28X242	28X282	93.00	50
28X240	28X280	81.00	15	.....	.....	.....	..

Meters for Use with Instrument Transformers

3-Phase, 3-Wire; 2 Phase, 3-Wire; 2-Phase, 4-Wire Circuits
For Use with Current and Potential Transformers

Secondary Rating of Instrument Transformers, 5 Amperes, 115 Volts

*Cat. No. 28X304 ..... each $54.00

For Use with Current Transformers

Secondary Rating of Current Transformers, 5 Amperes

Cat. No.	Each	Volts	Cat. No.	Each	Volts
*31X444	$54.00	115–120	*28X311	$74.00	460–480
*28X310	60.00	230–240	*28X312	74.00	575–600

*Nos. do not include transformers and order should state ratio of transformer with which they will be used that they may be calibrated and furnished with suitable register to read directly the primary energy. When meters are to be suitable for use with instrument transformers but not rated nor equipped with direct reading registers for any particular transformer combination, order should so state.

Meters can be supplied with detent device to prevent negative registration $1.00 net extra.

G-E Type D-15 Polyphase Watthour Meters

3-Element, 60 Cycles
4-Wire, 3-Phase Service

A single iron casting constitutes the base and frame and provides a rigid mounting for the parts as well as a housing for the elements. Parts are readily accessible. The one-piece terminal block is removable by removing two screws, and includes 8 current terminals and 7 potential and demand terminals.

Glass cover fits against cork gasket.

If wanted for circuits having voltage more than 10% above or below the minimum rated voltages below, specify the normal operating voltage; otherwise order by cat. no.

199-208△115-120Y Volts

Cat. No.	Each	Amperes	Cat. No.	Each	Amperes
28X318	$81.00	5	28X321	$97.00	25
28X319	87.00	10	28X322	109.00	50
28X320	91.50	15	.....	.....	..

460-480△266-277Y Volts

28X328	$90.00	5	28X331	$106.00	25
28X329	96.00	10	28X332	118.00	50
28X330	100.00	15	.....	.....	..

Meters for Use with Instrument Transformers

For Use with Current and Potential Transformers

Secondary Rating of Instrument Transformers, 5 Amperes, 115 Volts

*Cat. No. 28X336. .....each $81.00

For Use with Current Transformer Only

Secondary Rating of Current Transformers, 5 Amperes

Cat. No	Each	Circuit Rating Volts	Cat. No.	Each	Circuit Rating Volts
*28X341	$81.00	199–208△ 115–120Y	*28X342	$90.00	460–480△ 266–277Y

*Nos. do not include transformers. Order should specify ratio of transformers with which they will be used that they may be calibrated and furnished with suitable register to read directly the primary energy. When meters are to be suitable for use with instrument transformers but not rated nor equipped with direct reading registers for any particular transformer combination, order should so state.

Meters can be supplied with detent to prevent negative registration for $1.00 net extra.

G-E D.C. Watthour Commutating Meters

For House Service
Type C-6—Side Connected—Metal Cover

In this meter the resistor for the potential circuit is combined with the light load compensating coil, no other external resistance being used. The entire meter element is supported on a frame of aluminum alloy. The back is also cast of aluminum alloy. Cover is of zinc with domed front, which adds greatly to its strength, and provided with a single window to observe the dial.

The external finish is dull black, presenting a neat appearance. The frame and various parts inside the meter retain their natural finish of aluminum and brass.

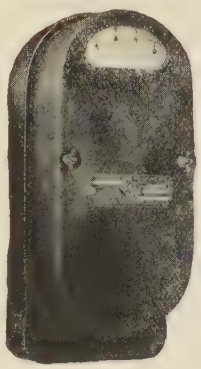
2-Wire

Cat. No.	Each	*Volts	Amps.	Cat. No.	Each	*Volts	Amps.
37594	$31.00	115–120	5	37614	$35.00	230–240	5
37595	33.00	115–120	10	37615	40.00	230–240	10
37596	37.00	115–120	15	37616	47.00	230–240	15
37597	44.00	115–120	25	37617	54.00	230–240	25
37598	58.00	115–120	50	37618	68.50	230–240	50
37599	72.00	115–120	75	37619	74.00	230–240	75
37600	85.00	115–120	100	37620	87.00	230–240	100
37601	99.00	115–120	150	37621	112.00	230–240	150
37602	126.00	115–120	300	37622	144.00	230–240	300
37603	180.00	115–120	600	37623	200.00	230–240	600
			3-Wire				
37604	$35.00	230–240	5	37609	$79.00	230–240	75
37605	40.00	230–240	10	37610	94.00	230–240	100
37606	47.00	230–240	15	37611	121.00	230–240	150
37607	54.00	230–240	25	37612	166.00	230–240	300
37608	71.00	230–240	50	.....	.....	.....	..

Meters can be equipped with ratchet device to prevent negative registration for $2.00 net extra.

*When ordering meters for voltages outside of these limits the normal operating voltage should be specified.

Type C-15—Bottom Connected—Metal Cover



This meter is identical in principle with the Type C-6 meter and retains those essential features which insure successful operation.

Meter differs largely in mechanical details, which are possible by limiting its ratings to 5, 10 and 15 amperes, 2 and 3-wire, and a maximum of 250 volts.

These differences are reduction in size and weight and the use of Type I-16 meter parts, such as register, terminals, and magnets, including micrometer full-load adjustment device.

Has removable terminals and separately sealed terminal chamber.

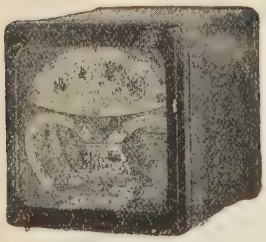
2-Wire

Cat. No.	Each	*Volts	Amps.	Cat. No.	Each	*Volts	Amps.
269862	$26.00	115–120	5	269864	$29.00	230–240	5
269863	28.00	115–120	10	269865	33.00	230–240	10
279274	32.00	115–120	15	279275	39.00	230–240	15
3-Wire, 4-Terminal				**3-Wire, 6-Terminal**			
269866	$29.00	230–240	5	290855	$29.00	230–240	5
269867	33.00	230–240	10	290856	33.00	230–240	10
279276	39.00	230–240	15	290857	39.00	230–240	15

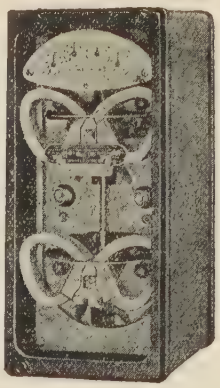
Meters can be equipped with ratchet device to prevent negative registration for $2.00 net extra.

*When ordering meters for voltages outside of these limits the normal operating voltage should be specified.

G-E Watthour Meters
For Switchboard Service
60 Cycles



Type IS-8



Type DS-19

This line combines the improved elements of G-E front-connected meters with the narrow switchboard case. May be mounted on 5½-inch centers permitting maximum number on panel of given width.

Finished in aluminum interior and black exterior. Steel parts galvanized before finish is applied.

Self-contained sizes have good accuracy on loads up to 300%; ample margin of safety on greater loads. Polyphase types have potential indicating lamps. In case of an open circuit, lamp on that phase shows "out." If wanted for circuits having voltage more than 10% above or below minimum rated voltages, specify normal operating voltage.

Type IS-8 (Single-Phase) Self-Contained Meters
2-Wire

Cat. No.	Each	Volts	Amps.	Cat. No.	Each	Volts	Amps.
21X913	$40.00	115–120	5	21X917	$42.00	230–240	5
21X915	43.00	115–120	10	21X919	45.00	230–240	10

Type IS-8 for Use with Instrument Transformers
For Use with Current and Potential Transformers
Secondary Rating, 5 Amps., 115 Volts

*21X921	$40.00	115	5	.....	.....	.....	..

For Use with Current Transformers
Secondary Rating, 5 Amperes

*21X923	$40.00	115–120	..	*21X925	$42.00	230–240	..

Type DS-19 (Polyphase) Self-Contained Meters
For 3-Wire, 2 and 3-Phase; 4-Wire, 2-Phase

Cat. No.	Each	Volts	Amps.	Cat. No.	Each	Volts	Amps.
21X931	$72.00	115–120	5	23X113	$89.00	460–480	5
21X933	76.00	115–120	10	23X115	93.00	460–480	10
21X935	79.00	230–240	5	23X117	89.00	575–600	5
21X937	83.00	230–240	10	23X119	93.00	575–600	10

Type DS-19 for Use with Instrument Transformers
For Use with Current and Potential Transformers
Secondary Rating, 5 Amps., 115 Volts

*21X939	$72.00	...	..	.....	.....	.....	..

For Use with Current Transformers
Secondary Rating, 5 Amperes

*21X941	$72.00	115–120	..	*21X945	$89.00	460–480	..
*21X943	79.00	230–240	..	*21X947	89.00	575–600	..

Type DS-20 (Polyphase) Self-Contained Meters
For 4-Wire, 3-Phase

Cat. No.	Each	Volts	Amperes
21X949	$108.00	199–208△ and 115–120Y	5
21X951	114.00	199–208△ and 115–120Y	10
21X953	118.00	460–480△ and 266–277Y	5
21X955	124.00	460–480△ and 266–277Y	10

Type DS-20 for Use with Instrument Transformers
For Use with Current and Potential Transformers
Secondary Rating, 5 Amps., 115 Volts

*21X957	$108.00	...	..

For Use with Current Transformers
Secondary Rating, 5 Amperes

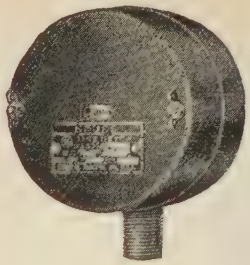
*21X959	$108.00	199–208△ and 115–120Y	..
*21X961	118.00	460–480△ and 266–277Y	..

*Meter only. Transformers should be ordered by Cat. No. and rating. If meters are to be used with instrument transformers in customer's possession, ratio of transformers must be given on order. Unless otherwise specified, meters ordered with transformers or for use with transformers in customer's possession will be calibrated and furnished with suitable register to read directly the primary energy. When ordering meters for voltages outside these limits, specify normal voltage.

Meters can be supplied with top bearing detent to prevent registration for $1.00 net extra.

Prices on meters for other frequencies on request.

G-E Type KT Electric Time Meters



Consists of a little synchronous motor, geared to a registering counter, the whole mounted in a case about 4½ inches in diameter and 2¾ inches deep.

Meter will measure actual operating time of any electric equipment depending on a.c. For example, meter may be used to indicate machine hours by showing motor running hours, the "on" time of street lighting circuits, etc.

Supplied to register hours, tenths of hours or minutes. In ordering, specify register desired, voltage and cycles of circuit; whether portable, conduit or switchboard type.

115 Volts, 25, 50 or 60 Cycles.....each **$17.00**
230 Volts, 25, 50 or 60 Cycles.....each **18.00**
460 Volts, 25, 50 or 60 Cycles.....each **19.00**

Jewels and Pivots for Watthour Meters
Jewels—Mounted in Screws

No. 39924—Sapphire

For d.c. meters, Types C, C-5, C-6, C-7, C-9 and C-15; single-phase, house and switchboard meters, Types I, I-8, IS-2 and IS-3 and polyphase meters Types D-3, D-4, D-9, DS-2, DS-3, DS-4, DS-5 and DS-9

No. **39924**, in Lots of 10..... **$6.60**

No. 6X453—Sapphire

For single-phase meters, Types I-14, I-15, I-16, I-18, IS-4, IS-5, IS-6, IS-7 and IS-8; for polyphase meters, Types D-6, D-7, D-8, D-14, D-15, DS-6, DS-7, DS-11, DS-12, DS-19, DS-20, DS-21 and DS-23 and for test meters, Types IB-5, IB-6, IB-7, IB-8 and IB-9.

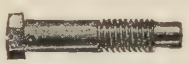
No. **6X453**, in Lots of 10..... **$5.40**

No. 39925—Diamond

For d.c. house service meters of Type C construction.

No. **39925**, in Lots of 10..... **$52.00**

No. 118569—Diamond



For d.c. meters of double armature, construction, Types CS, CS-2, CS-3 CS-4, G-2 and G-3.

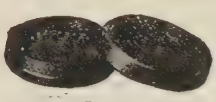
No. **118569**, in Lots of 10..... **$52.00**

No. 39926—Diamond

For Types E and G house service d.c. meters of earlier than Type C construction.

No. **39926**, in Lots of 10..... **$52.00**

No. 295309 Pivots



For all types of meters. Packed in boxes of 25.

No. **295309**.....per box **$3.85**

Model 45 Weston Portable D.C. Instruments

For general testing work for rugged service.

Accurate within ½ of 1%. Permanent magnet moving coil type. Shielded from external magnetic fields.

Enclosed in a polished hardwood case provided with a hinged cover and carrying handle.

Voltmeters, ammeters and milliammeters are 8x8x4¾ inches in size; scale length, 5$\frac{3}{16}$ inches. Approximate weight, 9.9 pounds.

Voltmeters

Resistance, 100 ohms per volt, self-contained to 750 volts inclusive; ranges from 750 to 25000 volts may be had by using external multipliers. Voltmeters having a higher sensitivity then 100 ohms per volt available on order.

Single Range

Ranges	Each	Scale Divisions	Ranges	Each	Scale Divs.
*.2–0–2.8	$60.00	150	150	$60.00	150
1.5	60.00	150	300	64.00	150
3	60.00	150	600	72.00	120
5	60.00	100	750	76.00	150
15	60.00	150	...	.....	...
Double Range					
15/ 3	$65.00	150	300/150	$69.00	150
150/ 3	65.00	150	600/150	77.00	150
150/15	65.00	150	600/300	77.00	150
150/75	65.00	150	750/150	81.00	150
Triple Range					
150/ 15/3	$70.00	150	750/300/150	$86.00	150
300/150 3	74.00	150	....	......	..

*Scale adapted for use in connection with cadmium test on storage batteries.

Ammeters

Self-contained up to and including 25 amperes; above 25 amperes, with external shunts. Ranges, 1.5 to 25 amperes may be had with external shunts, at base price plus price of shunt selected. Specify when desired for use with Weston Rotary Shunt, as an instrument with a special movement having a resistance of 10 ohms and a sensitivity of 5 milliamperes must be supplied for this purpose. This special instrument is supplied without extra charge.

Ranges	Each	Scale Divs.	Ranges	Each	Scale Divs.	Ranges	Each	Scale Divs.
**Base	$60.00	...	25	$67.00	125	300	$68.25	150
1.5	67.00	150	50	67.00	100	500	71.25	100
3	67.00	150	75	67.00	150	750	74.00	150
5	67.00	100	100	67.00	100	1000	80.00	100
10	67.00	100	150	67.00	150	1500	89.00	150
15	67.00	150	200	67.00	100	....	.....	...

**To determine the price of any other range ammeter not listed, add base price to price of shunt desired.

Milliammeters

Range	Each	Scale Divs.	Resist. Ohms	Range	Each	Scale Divs.	Resist. Ohms
1.5	$61.00	150	360	100	$60.00	100	.50
3	61.00	150	210	150	60.00	150	.85
7.5	60.00	150	28	300	60.00	150	.17
15	60.00	150	3.3	750	67.00	150	.07
30	60.00	150	1.67	1500	67.00	150	.03
75	60.00	150	0.70	....	.....	..	.

Leather Case for Instruments shown above..each $13.00

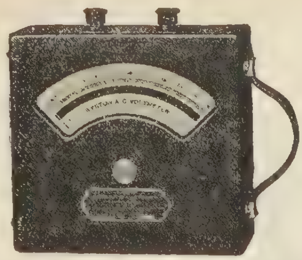
Volt-Ammeters

Current and voltage ranges are self-contained. Voltage sensitivity is exactly 100 ohms per volt. Dimensions, 7⅞x9$\frac{11}{16}$x4⅝ inches. Approximate weight, 10.5 pounds.

Ranges: Volts	Ranges: Amperes	Each	Scale Divs.
350	350 MA.	$80.00	140
†30/3	30/3/0.3/0.03	105.00	150
‡150/30/3	30/3/0.3	100.00	150
150/15/1.5	15/1.5/.15	100.00	150
†150/15/3	15/1.5/.15	100.00	150

†Conforms with A.R.A. specifications. ‡Designed for railway use; all ranges protected by replaceable fuses.

Model 155 Weston Portable A.C. Instruments



Movable iron type. Scale length, 5¼ inches. Black walnut case without cover, leather carrying handle.

Power consumption: Voltmeters at 115 volts, 6.5 watts; at 115 volts, 25 or 60 cycles, 6.5 volt-amperes. Ammeters at 5 amperes, 1.1 watts; at 5 amperes, 25 cycles, 1.1 volt-amperes; at 5 amperes, 60 cycles, 1.4 volt-amperes.

*Voltmeters

Self-contained up to and including 750 volts. Higher ranges may be obtained by using Models 311 or 457 portable potential transformers in conjunction with 150-volt instrument. Dimen.: to 300 v., 7x7⅛x3¼"; above 300 v., 7¾x8¾x4". Wt.: to 300 v., 4 lbs.; above 300 v., 5 lbs.

Single Range

Range	Each	Resist. Ohms	Scale Divs.	Range	Each	Resist. Ohms	Scale Divs.
30	$58.00	150	150	250	$61.00	4150	125
50	58.00	415	100	300	62.00	5000	150
75	58.00	625	150	500	67.00	8333	100
125	58.00	1670	125	600	70.00	10,000	120
150	58.00	2000	150	750	74.00	12,500	150

Double Range

Ranges	Each	Approx. Resist. Ohms	Scale Divs.
150/75	$63.00	1250/625	150
300/150	67.00	5000/2500	150
600/150	75.00	10000/2500	150
600/300	75.00	10000/5000	150
750/150	79.00	12500/2500	150
750/300	79.00	12500/5000	150
Triple Range			
450/300/150	$77.00	7500/5000/2500	150
600/300/150	80.00	10000/5000/2500	150
750/300/150	84.00	12500/5000/2500	150

*Meters to be used on 500 cycles, add $4.00 to prices.

Ammeters

Self-contained up to and including 500 amperes. Higher ranges available by using Models 312, 313 or 461 current transformers in conjunction with 5-ampere instrument. Dimen.: to 300 amp., 7x7⅛x3¼"; above 300 amp., 7¾x8¾x4". Wt.: to 300 amp., 4 lbs.; above 300 amp., 5 lbs.

Single Range

Range	Each	Approx. Resist. Ohms	Inductance Henries	Scale Divs.
1	$56.00	1.15	.00244	100
2	56.00	.287	.00057	100
3	56.00	.128	.00027	150
5	56.00	.0435	.000091	100
10	56.00	.0127	.000023	100
15	60.00	.0066	.000011	150
25	60.00	.0032	.0000033	125
50	62.00	.00117	....	100
75	62.00	.00085	....	150
100	65.00	.00047	....	100
150	68.00	.00034	....	150
200	71.00	.00034	....	100
250	74.00	.000172	....	125
300	77.00	.000172	....	150
400	85.00	.000054	....	80
500	85.00	.000054	....	100
Double Range				
1/.5	$71.00	1.15/4.6	....	100
2/1	71.00	.34/1.36	....	100
5/2.5	71.00	.052/0.218	....	100
10/5	71.00	.012/0.045	....	100

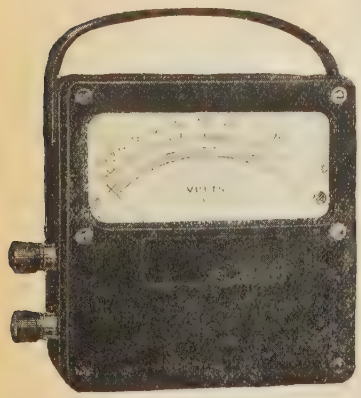
Milliammeters

Range	Each	Approx. Resist. Ohms	Inductance Henries	Scale Divs.	Range	Each	Approx. Resist. Ohms	Inductance Henries	Scale Divs.
20	$56.00	1540	2.2	100	150	$56.00	33	.067	150
30	56.00	624	1.1	150	250	56.00	12	.022	125
50	56.00	433	.61	100	500	56.00	2.25	.006	100
75	56.00	123	.28	150	750	56.00	1.10	.002	150

Double range milliammeters, prices on application.

Leather cases: For voltmeters up to and including 300 volts, ammeters up to and including 300 amperes, and all milliammeters, $11.00; for voltmeters above 300 volts, $14.00; for ammeters above 300 amperes, $12.00.

Model 433 Weston Portable A.C. Instruments



Electromagnetic or moving iron type instruments contained in bakelite cases with leather carrying handles. Shielded from external magnetic fields.

Instruments can be left in circuit continuously without overheating, therefore no contact key is used.

Dimensions, $5\frac{1}{16}$x$6\frac{1}{32}$x $3\frac{1}{2}$ inches; scale length, $3\frac{13}{16}$ inches. Weight, $2\frac{1}{2}$ pounds.

Voltmeters

Self-contained for ranges shown. Higher ranges obtained by using multipliers or Model 311 or 457 potential transformer in conjunction with a 150-volt instrument; for use on frequencies up to 133 cycles per second.

Voltmeters to be used on 500 cycles, add $4.00 to prices.

Single Range

Ranges	Each	Resist. Ohms	Scale Divs.	Ranges	Each	Resist. Ohms	Scale Divs.
10	**$41.00**	80	100	**75**	**$41.00**	2660	75
15	**41.00**	168	150	**100**	**41.00**	3500	100
20	**41.00**	224	100	**125**	**41.00**	4400	125
30	**41.00**	425	60	**150**	**41.00**	5300	150
50	**41.00**	1140	100	**250**	**44.00**	18200	50
60	**41.00**	1370	60	**300**	**45.00**	22000	60

Double Range

10/5	**$46.00**	40/20	100	***150/15**	**$46.00**	3000/300	150
20/10	**46.00**	160/80	100	**150/75**	**46.00**	5300/2650	150
30/15	**46.00**	336/168	150	**300/150**	**50.00**	22000/11000	150
60/30	**46.00**	850/425	60	.....	.....	.....	...

*Low range of this combination has an accuracy of 3%.

Triple Range

Has metal extension on case to accommodate additional resistance necessary for high ranges.

Ranges	Each	Resistance Ohms	Scale Divs.
450/300/150	**$60.00**	33000/22000/11000	150
600/300/150	**63.00**	44000/22000/11000	150

Ammeters

For use on frequencies up to 500 cycles per second, except triple range ammeters which have self-contained transformer limiting use to a.c. with frequencies up to 133 cycles.

Single Range

Ranges	Each	Resist. Ohms	Inductance Henries	Scale Divs.	Ranges	Each	Resist. Ohms	Inductance Henries	Scale Divs.
1	$39.00	1.13	.00095	100	10	$39.00	.014	.0000084	100
1.5	39.00	.476	.00044	150	15	43.00	.007	.0000036	150
2	39.00	.282	.00025	100	25	43.00	.003	.0000013	50
3	39.00	.119	.00011	60	30	43.00	.002	.000001	60
5	39.00	.053	.000038	100	50	45.00	.0005	.0000003	100
7.5	39.00	.02	.000017	75	..	.....	.....	.....	..

Double Range

Ranges	Each	Resist. Ohms	Scale Divs.	Ranges	Each	Resist. Ohms	Scale Divs.
10/5	**$52.00**	.0135/.054	100	**20/10**	**$56.00**	.0033/.0135	100

Triple Range

Operate through self-contained multi-range transformers, therefore they cannot be used on d.c.

3/1.5/.75	**$88.00**	.....	150	**15/7.5/1.5**	**$88.00**	.....	150
5/2.5/1	**88.00**	.....	50	**20/5/2**	**88.00**	.....	100
7.5/3/1.5	**88.00**	.....	150	**30/7.5/3**	**88.00**	.....	150
10/5/1	**88.00**	.....	50	**50/20/5**	**88.00**	.....	100
10/5/2.5	**88.00**	.....	50	**50/20/10**	**88.00**	.....	100

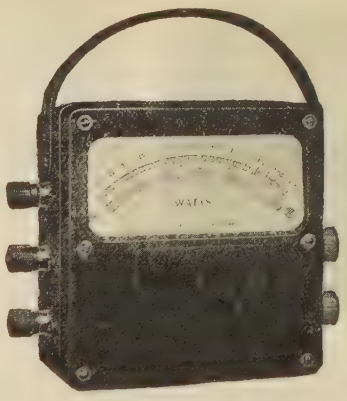
†Milliammeters

Single Range

Range	Each	Resist. Ohms	Scale Divs.	Range	Each	Resist. Ohms	Scale Divs.
30	**$39.00**	460	60	**300**	**$39.00**	10.9	60
75	**39.00**	211	75	**400**	**39.00**	6	80
100	**39.00**	123	100	**500**	**39.00**	3.85	100
150	**39.00**	49	150	**600**	**39.00**	2.5	60
200	**39.00**	29.5	100	**750**	**39.00**	2	75
250	**39.00**	16.4	50	Leather Cases		..each	**$8.00**

†Also available in double range combinations.

Model 432 Weston Portable D.C. and Single-Phase A.C. Wattmeters



This wattmeter is of the electrodynamometer type, accurate within ½ of 1%. Shielded from external magnetic fields.

Made with double voltage and single and double current ranges, self-contained up to 300 volts and 50 amperes. Potential ranges up to 750 volts are available by using external multipliers, higher ranges require the use of potential transformers such as the Model 311 or 457. Current ranges can be extended beyond 50 amperes by using a 5-ampere instrument in conjunction with either the Model 312, 313 or 461 current transformers.

Potential ranges have maximum voltage capacities as shown in the range listing. The maximum capacity of the current ranges is 50% greater than the normal rated current capacity.

These instruments are accurate on all commercial frequencies up to 133 cycles per second. The phase angle is negligible on such frequencies. They may be used on d.c. and checked in comparison with d.c. standards. The temperature error is less than 1% for 25° C. change in temperature.

As the working error is negligible, they may be left in circuit continuously without appreciable effect on the accuracy.

Power consumption: Potential side, at 115 volts, 1.2 watts; at 115 volts, 25 or 60 cycles, 1.2 volt-amperes. Current side, at 5 amperes, .67 watt; at 5 amperes, 25 cycles, .73 volt-ampere and at 5 amperes, 60 cycles, .98 volt-ampere.

Dimensions: $6\frac{19}{32}$x$5\frac{1}{4}$x$3\frac{1}{2}$ inches; scale length, $3\frac{13}{16}$ inches. Weight, $3\frac{1}{4}$ pounds.

Volts Normal	Volts Max.	Each	Amperes Normal	Amperes Max.	Watts Low Range	Watts High Range	Approx. Res. Ohms Low Range	Approx. Res. Ohms High Range	Scale Divs.
75/150	100/200	**$70.00**	1	1.5	75	150	5500	11000	75
150/300	200/400	**74.00**	1	1.5	150	300	11000	22000	75
75/150	100/200	**70.00**	2	3	150	300	5500	11000	75
150/300	200/400	**74.00**	2	3	300	600	11000	22000	60
75/150	100/200	**70.00**	5	7.5	375	750	5500	11000	75
150/300	200/400	**74.00**	5	7.5	*.75	*1.5	11000	22000	75
75/150	100/200	**70.00**	10	15	*.75	*1.5	5500	11000	75
150/300	200/400	**74.00**	10	15	*1.5	*3	11000	22000	75
75/150	100/200	**73.00**	20	30	*1.5	*3	5500	11000	75
150/300	200/400	**77.00**	20	30	*3.	*6	11000	22000	60
75/150	100/200	**76.00**	50	75	*3.75	*7.5	5500	11000	75
150/300	200/400	**80.00**	50	75	*7.5	*15	11000	22000	75

*Kilowatts.

Double current ranges with range changing switch available at an extra charge. Prices upon application.

Leather Case.....each **$7.50**

Y-Boxes for Model 432 Wattmeters

For Use on Balanced 3-Phase 3-Wire Circuits

Normal Voltage of Instrument	Each	Y-Box Multiplying Constant	Normal Line Voltage With Y-Box	Maximum Voltage With Y-Box	Box Type	Box No.
75	**$24.00**	3	150	170	5	1
150	**24.00**	3	300	340	5	2
150	**24.00**	4	400	450	5	2
150	**24.00**	5	500	550	5	3
150	**24.00**	6	600	650	5	3

Model 430 Weston Portable D.C. Instruments

Accurate within ½ of 1%. Permanent magnet moving coil type. Unshielded from external magnetic fields.

Voltmeters are made with single and triple ranges at a standard sensitivity of 1000 ohms per volt, with 5000 ohms per volt also available at an increase in price.

Ammeters and milliammeters regularly made with single and triple ranges, self-contained up to 50 amperes inclusive. Double ranges available on special order. Microammeters are made only in single range form.

Voltmeters with triple ranges only; sensitivity, 1000 ohms per volt. Available with self-contained ranges of 300 volts and 50 amperes. Prices on application.

Dimensions, 5 1/16 x 6 1/32 x 3 1/2 inches; scale length, 4 inches. Approximate weight, 3 1/2 pounds.

Voltmeters

Single Range

Ranges	Each	Scale Divisions	Ranges	Each	Scale Divs.
3	$43.00	150	300	$47.00	150
15	43.00	150	600	55.00	120
50	43.00	100	750	59.00	150
150	43.00	150	1000	64.00	100

Triple Range

30/7.5/3	$53.00	150	500/100/10	$63.00	100
75/30/7.5	53.00	150	750/300/7.5	69.00	150
150/15/3	53.00	150	750/300/150	69.00	150
300/150/3	57.00	150	.....	.....	...

Above ranges also available with a sensitivity of 5000 ohms per volt at an increase in price. Suitable for electronic work.

Ammeters

Single Range

1	$43.00	100	7.5	$43.00	150
1.5	43.00	150	15	43.00	150
3	43.00	150	30	43.00	150
5	43.00	100	50	43.00	100

Triple Range

5/0.5/0.05	$53.00	100	25/10/2.5	$53.00	100
5/2.5/0.5	53.00	100	25/10/5	53.00	100
10/1/0.1	53.00	100	30/3/1.5	53.00	150
10/2.5/1	53.00	100	30/6/3	53.00	150
10/5/1	53.00	100	30/15/3	53.00	150
15/3/0.15	53.00	150	50/5/0.5	53.00	100
15/3/1.5	53.00	150	50/10/2	53.00	100
25/2.5/0.5	53.00	100	50/20/5	53.00	100
25/5/2.5	53.00	100	50/25/10	53.00	100

Milliammeters

Single Range

Ranges	Each	Approx. Resist. Ohms	Scale Divs.	Ranges	Each	Approx. Resist. Ohms	Scale Divs.
1	$44.00	92	100	30	$43.00	88	150
1.5	44.00	69	150	75	43.00	...	150
3	44.00	12.4	150	150	43.00	...	150
7.5	43.00	3.4	150	300	43.00	...	150
15	43.00	1.4	150	750	43.00	...	150

Triple Range

.75/.15/.03	$70.00	....	150	150/30/7.5	$53.00	...	150
3/0.3/0.03	70.00	....	150	1500/150/15	53.00	...	150
15/1.5/0.15	65.00	....	150	3000/300/30	53.00	...	150
30/7.5/3	54.00	....	150	3000/750/150	53.00	...	150
150/15/1.5	54.00	....	150	.....	.....	...	...

Milliammeters with ranges above 30 MA. are shunted and have a drop of 50 MV. ± 5%.

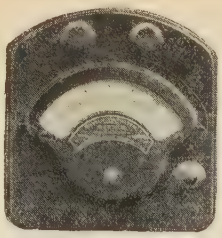
Microammeters

Single Range

30	$60.00	3300	150	200	$48.25	560	100
50	57.50	2200	100	500	48.25	275	100
100	55.00	1650	100	....	.....	...	...

Leather case for single range voltmeter, single or triple range ammeter, milliammeter or microammeter, $7.50; case for triple range voltmeter, $8.00.

Model 280 Weston Portable D.C. Instruments



Accurate within 1%. Permanent magnet moving coil type.

Voltmeters and volt-ammeters have resistances of approximately 100 ohms per volt.

Dimensions, 4.4x4.6x1.5 inches; scale length, 2 11/16 inches. Approximate weight, 1.1 pounds.

Voltmeters

Range	Each	Scale Divs.	Range	Each	Scale Divs.
1.2	$25.00	60	150	$25.00	75
1.5	25.00	75	400/40	40.00	40
3	25.00	60	350/35	40.00	70
5	25.00	50	25/10/2.5	29.00	50
7.5	25.00	75	30/3/1.5	29.00	60
10	25.00	50	30/15/3	29.00	60
15	25.00	75	50/5/2.5	29.00	50
20	25.00	40	50/25/5	29.00	50
30	25.00	60	100/25/2.5	29.00	50
*35	43.00	70	100/50/5	29.00	50
50	25.00	50	150/15/1.5	29.00	75
60	25.00	60	150/15/3	29.00	60
75	25.00	75	150/30/3	29.00	60
100	25.00	50	150/60/3	29.00	60
120	25.00	60	150/75/3	29.00	75

*A special voltmeter with a resistance of 32000 ohms; with double scale reading volts and ohms. For use in testing insulating resistance on train control systems.

Millivoltmeters

50	$25.00	50	300	$25.00	60
75	25.00	75	400	25.00	40
100	25.00	50	500	25.00	50
150	25.00	75	600	25.00	60
200	25.00	40	750	25.00	75
250	25.00	50	...	.....	..

Ammeters

1	$25.00	50	5/2.5/0.25	$29.00	50
1.5	25.00	75	10/1/0.1	29.00	50
2	25.00	40	10/1/0.5	29.00	50
3	25.00	60	10/5/0.5	29.00	50
5	25.00	50	10/2.5/1	29.00	50
7.5	25.00	75	15/3/0.15	29.00	60
10	25.00	50	15/3/1.5	29.00	60
15	25.00	75	25/2.5/0.5	29.00	50
20	25.00	40	25/5/2.5	29.00	50
25	25.00	50	25/10/2.5	29.00	50
30	25.00	60	25/10/5	29.00	50
†50	32.00	50	30/3/1.5	29.00	60
†100	32.00	50	30/6/3	29.00	60
†150	32.00	75	30/15/3	29.00	60

†Provided with external shunt having a drop of 50 MV.

Milliammeters

Milliammeters with ranges above 30 milliamperes are shunted and have a drop of approximately 100 MV.

Range	Each	Approx. Resist.	Scale Divs.	Range	Each	Approx. Resist.	Scale Divs.
1.5	$26.00	27	75	300	$25.00	.33	60
3	26.00	18	60	500	25.00	.2	50
5	25.00	12	50	750	25.00	.13	75
10	25.00	10	50	30/15/3	30.00	...	60
20	25.00	1.5	40	50/10/1	30.00	...	50
25	25.00	1.2	50	50/10/5	29.00	...	50
30	25.00	1.2	60	50/25/5	29.00	...	50
50	25.00	2.0	50	125/25/5	29.00	...	50
75	25.00	1.33	75	150/15/1.5	29.00	...	75
100	25.00	1.00	50	150/75/15	29.00	...	75
150	25.00	0.66	75	600/120/30	29.00	...	60
250	25.00	0.4	50	.....	.....	...	..

Volt-Ammeters

Ranges Volts	Each	Amperes	Scale Divs.	Ranges Volts	Each	Amperes	Scale Divs.
30/3/1.5	$43.00	30/3/1.5	60	150/15/1.5	$43.00	30/15/1.5	60
30/15/3	43.00	15/3/0.15	60	‡150/15/3	43.00	15/1.5/0.15	60
30/3/1.5	43.00	30/3/0.3	60	150/15/3	43.00	15/3/1.5	60
50/5/2.5	43.00	10/1/0.1	50	150/15/3	43.00	30/3/1.5	60
50/5/2.5	43.00	10/5/0.5	50	150/15/3	43.00	30/15/3	60
50/25/2.5	43.00	25/2.5/0.5	50	150/15/3	43.00	30/3/0.3	60
‡60/30/6	43.00	6/0.6/0.03	60	150/15/3	43.00	30/15/1.5	60
150/15/1.5	43.00	15/1.5/0.15	75	150/30/3	43.00	30/15/1.5	60
150/15/1.5	43.00	15/1.5/0.3	60	150/30/3	43.00	30/0.6/0.06	60
150/15/1.5	43.00	30/3/1.5	60	150/60/3	43.00	30/.6/.06	60

‡For railway and automatic train control testing.

Leather Case for Model 280 Instruments.....each $3.00

Model 540 Weston Portable Fused 6-Range Volt-Ammeters

For D.C. Only

Accurate within 1%. Permanent magnet moving coil type. Contained in bakelite case with hinged cover and leather carrying strap.

All ranges fused for protection from overloads. Voltage ranges protected by single fuse located in a cap. Each of current ranges protected by individual fuse mounted in special compartment covered by hinged back. Ranges are brought out through selector switch to 3 binding posts, a common +, a current and a potential post. By this arrangement instrument can be so connected to circuit that both current and voltage readings can be taken by turning switch without changing connections. Line is closed at all times when connecting to ammeter binding post.

Dimensions, 3 5/16 x 4 7/8 x 2 1/2 inches; scale length, 2 11/16 inches. Approximate weight, 2 pounds.

Ranges			Scale
Volts	Each	Amperes	Divisions
30/3	$50.00	15/1.5/0.15/0.03	60
30/3/1.5	50.00	30/3/0.03	60
60/30/6	50.00	6/0.6/0.03	60
150/15/1.5	50.00	15/1.5/0.15	75
150/15/3	50.00	15/1.5/0.15	60
150/15/3	50.00	15/1.5/0.3	60
150/15/3	50.00	30/3/0.3	60
150/15/3	50.00	30/15/3	60
150/30/3	50.00	30/3/0.3	60
150/30/3	50.00	30/0.6/0.06	60

Extra replacement fuses in assorted lots of one dozen, $1.00. When ordering, give range of instrument and quantity of fuses desired for each range.

Model 330 Weston Portable A.C.

Accurate within 1% at 60 cycles, 2% at 25 to 100 cycles. Iron core dynamometer type. Contained in a mottled red and black bakelite case with hinged cover and leather carrying handle.

In this type of voltmeter, low ranges combined with an unusually high sensitivity are possible. For use wherever current drain caused by instrument must be limited to a low value. Although the high sensitivities of the copper oxide type of voltmeter are not possible with this meter, nevertheless its accuracy is unaffected by wave form and variations in frequencies over relatively wide limits.

A range-changing switch is incorporated for selection of ranges. To eliminate parallax errors and facilitate accurate readings, a knife-edged pointer and mirror scale are used.

Dimensions, 3 15/16 x 4 7/8 x 1 13/16 inches; scale length, 2 11/16 inches. Approximate weight, 1 3/4 pounds.

For measurement of a.c. voltages below .2 volt, the use of Model 482 thermocouple instruments is recommended.

Ranges	Sensitivity Ohms per Volt	Scale Divisions	Each
150/15	20	75	$55.00
10/5/1	20	50	55.00
25/5/1	20	50	55.00
*25/5/2.5	70	50	60.00
125/25/12.5	20	50	60.00
15/7.5/1.5/.75	12	75	60.00
**125/25/5/1	20	50	60.00
150/30/15/1.5	20	75	60.00
150/50/10/1	20	50	60.00

*For measuring voltage drop across operating coil on main relay of net work protectors; for 60-cycle service.
**Conforms with A.R.A. specifications.

Weston Portable Instruments

Model 489

For all-around checking purposes. Models 489 and 528 double range meters and Model 528 single range meters have binding posts. All triple ranges have pin jacks.

Accuracy within 2%.

Approximate weight, 11 oz.

Model 489—D.C.

Permanent magnet moving coil type; enclosed in black bakelite case; silver etched dial, 2 3/8 inches long, with black markings. Dimensions, 3 29/32 x 3 13/64 x 1 29/32 inches.

Voltmeters

Double Range				Triple Range			
Ranges	Each	Scale Divs.	Ohms per Volt	Ranges	Each	Scale Divs.	Ohms per Volt
150/7.5	$13.50	75	125	750/250/10	$28.00	75/50	1000
200/8	13.50	40	125	.....	.....	.....	....
200/8	22.50	40	1000	.....	.....	.....	....
250/50	22.50	50	1000	.....	.....	.....	....

Ammeters

Single Range			Double Range		
Range	Each	Scale Divs.	Range	Each	Scale Divs.
1	$13.50	50	10/1	$15.50	50
10	13.50	50	15/3	15.50	75/60
30	13.50	60	30/3	15.50	60

Milliammeters

Double Range							
Ranges	Each	Resist. Ohms	Scale Divs.	Ranges	Each	Resist. Ohms	Scale Divs.
150/15	$13.50	.7/4.1	75	150/30	$13.50	.7/2.6	60

Volt-Milliammeters

Ranges	Each	Res. 2 Ma. Range	Scale Divs.	Ohms per Volt
200/8 Volts, 2 Milliamperes	$21.00	15 Ohms	40	125

Leather Case for Model 489 Instruments.....each $2.50

Model 528—A.C.

Movable iron type; mottled red and black bakelite case. Unshielded from external magnetic fields. Dimensions, 3 29/32 x 3 13/64 x 2 inches; scale length, 2 1/2 inches.

Voltmeters

Double Range			
Ranges	Each	Approximate Res. Ohms	Scale Divisions
150/ 15	$13.50	7350/ 735	30
300/150	15.50	31600/15800	30
600/150	18.50	100000/25000	30
600/300	18.50	100000/50000	30
Triple Range			
150/15/3	$16.50	8700/150/30	30/30
150/ 8/4	16.50	10000/ 80/40	30/40
300/ 8/4	19.00	43000/ 80/40	30/40

Ammeters

Single Range				Double Range			
Ranges	Each	Resist. Ohms	Scale Divs.	Ranges	Each	Resist. Ohms	Scale Divs.
1	$13.50	.204	50	15/3	$21.00	...	30
3	13.50	.0249	30	15/5	21.00	...	30/50
5	13.50	.0108	50	15/7.5	21.00	...	30
10	13.50	.0067	50	30/3	23.00	...	30
15	13.50	.003	30	30/5	23.00	...	30/50
20	13.50	.0025	40	.....	.....	...	.....
30	15.50	.0016	30	.....	.....	...	.....
50	15.50	.0014	50	.....	.....	...	.....

Milliammeters

Single Range							
15	$13.50	2000	30	100	$13.50	28	50
25	13.50	690	25	250	13.50	4.7	25
50	13.50	175	50	500	13.50	1.1	50

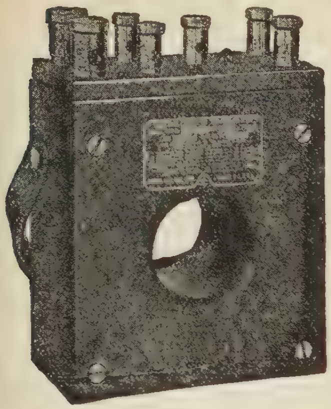
Leather Case for Model 528 Instruments.....each $2.50

Model 539 Weston Portable Current Transformers

For use with Model 528 ammeters. Primary ranges: 2, 5, 10 and 20 amperes, self-contained primary; maximum of 200 amperes inserted primary. Weight, 2 5/8 pounds.

Model 539, Size 5 1/2 x 4 1/8 x 1 7/8 Inches.....each $28.00

Model 461 Weston Portable Multi-Range Current Transformers



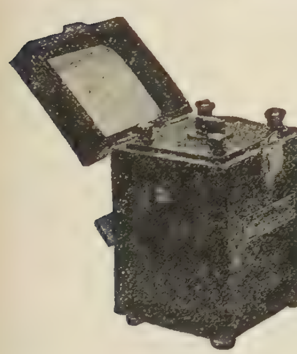
Has 4 self-contained primary ranges of 10, 20, 50 and 100 amperes to which connections are made by means of binding posts; with one turn of wire through core opening a primary range of 800 amperes results; with 2 turns, 400 amperes; with 4 turns, 200 amperes, etc. Secondary current rating at normal primary current is 5 amperes. A short-circuiting switch is provided for secondary winding to prevent damage to transformer if secondary circuit should be opened while current is on primary. Maximum secondary burden is 5 volt-amperes. Transformer is contained in a black, moulded bakelite case.

Has a ratio accuracy sufficiently high for use with Models 155 and 433 ammeters or Models 329 and 432 wattmeters without the use of correction curves when used on frequencies of from 25 to 133 cycles per second, and with secondary burdens within limit of 5 volt-amperes. Line potentials up to 2500 volts are permissible. When ordering correction curves state model, type and serial number of instruments to be used and frequency or frequencies at which curves are to be made. If more than one curve is required with different combinations of instruments, list those combinations. State length and size of leads to be used, otherwise 10-foot leads of No. 14 B. & S. gauge (resistance .05 ohms) will be assumed.

Dimensions, 6⅝x7⅞x2¾ inches. Weight, 7¼ pounds.

Model **461**....................................each **$73.50**
Leather Case....................................each **9.00**

Model 457 Weston Portable Potential Transformers



Designed to meet the demand for a compact, light weight portable transformer which can be conveniently transported with other measuring instruments, and yet will perform with a high degree of accuracy.

Contained in a black walnut case with hinged cover, lock and leather carrying strap.

Primary range is changed by means of a range-changing switch which enables the ratio of primary ranges of 4 to 1 to be easily selected.

Designed for a maximum secondary burden of 25 volt-amperes at 115 volts and frequencies of from 50 to 150 cycles per second. Ratio accuracy is within one-half per cent from 0 to 25 volt-amperes secondary burden which is sufficient for use with Models 155, 433, 329 or 432 without the use of correction curves. If correction curves are desired, state model and serial numbers of instruments to be used, and frequency or frequencies at which curves are to be made. If more than one curve is required with different combinations of instruments, list combinations.

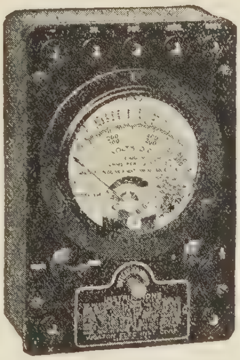
Primary to secondary tested for breakdown at 10000 volts for one minute.

Frequency per second, 50 to 150 cycles.

Dimensions, 8$\frac{5}{16}$x5¾x5⅛ inches. Weight 11½ pounds.

Volts — Normal	Volts — Maximum	Each
2300/575 to 115	3000/750 to 150 at 60 Cy. 2500/625 to 125 at 50 Cy.	**$145.00**
3000/750 to 100	3750/937.5 to 125	**145.00**

Model 564 Weston Volt-Ohmmeters



The equipment consists of a Model 301 with four 1000 ohms per volt voltage ranges of 600/300/30/3 and resistance ranges of either 0-100000 and 0-1000 ohms or 0-1000000, 0-100000 and 0-1000 ohms. A self-contained 4½-volt C battery is provided for potential. A pair of 50-inch test leads is shipped with each Model 564.

Any change in potential of the self-contained battery can be readily compensated for by short circuiting the pin-jacks X-X and adjusting the pointer to the zero ohm position by turning the voltage adjuster located at the top of the nameplate.

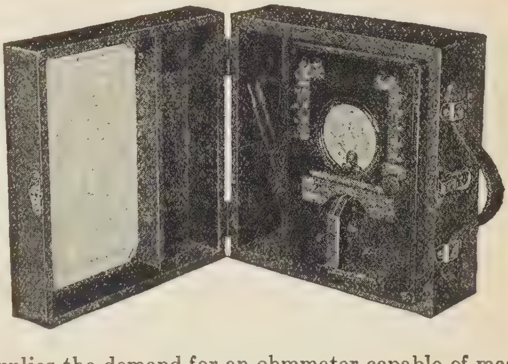
All voltage ranges are brought out to pin-jacks. A toggle switch connects the meter in circuit as a voltmeter or ohmmeter. The instrument sensitivity, when used as an ohmmeter, may be changed by a toggle switch from 1 to 100 milliamperes when using the 100000 or 1000-ohm scale; when using the 1000000-100000-1000-ohm instrument the sensitivity may be changed from .1, or 1 to 100 milliamperes. This simplifies checking up trouble in high or low resistance circuits.

Shipping weight, 6 pounds.

Model **564**, 0-1000000-Ohm Instrument.........each **$35.50**

Model **564**, 0-100000-Ohm Instrument..........each **30.00**

Model 663 Weston Volt-Ohmmeters



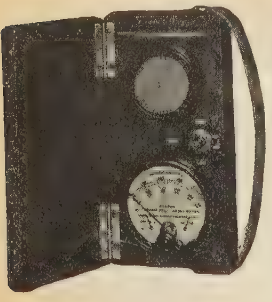
Supplies the demand for an ohmmeter capable of measuring very low and very high resistances.

This volt-ohmmeter is made possible by the use of a super-sensitive instrument requiring only 50 microamperes for full scale deflection. This instrument is connected into circuit network by means of a control switch which selects desired range of 6 available ohmmeter ranges, or as a milliammeter or voltmeter for d.c. and voltage measurements. Resistance measurements from .1 ohm to 10 megohms; voltage measurements to 1000 volts and current measurements to 100 milliamperes are available.

The scale of the indicating instrument is marked 0-1000 ohms, 0-2.5-5-10 volts and milliamperes. The following ranges are available: 0-5-25-250-2500-25000-250000 ohms center scale; 0-200-1000-10000-100000-1000000-10000000 ohms full scale; 0-2.5-10-100-250-500-1000 volts full scale, 1000 ohms per volt; 0-1-5-25-100 milliamperes full scale at 500 millivolts.

Model **663**, Less Carrying Case................each **$60.00**
Model **663** Carrying Case......................each **5.00**

Model 614 Weston Foot-Candle Meters



A direct reading foot-candle meter calibrated directly in terms of tungsten filament standard lamps. Responds quickly to even slight variations of light.

With this meter any user of light can analyze lighting conditions and determine the correct illumination for each particular and individual purpose.

Does not require the use of batteries, voltage or lamps; has indefinite life with permanent calibration.

The operating equipment consists of an indicating instrument, a 3-way toggle switch and a Photronic photo-electric cell all mounted on a bakelite panel. The instrument reads directly in foot-candles and has 3 ranges, 0-50, 0-250 and 0-500 which are controlled by the 3-way toggle switch. The Photronic photo-electric cell or light target is hinged so that it can be lifted from the horizontal to the vertical position.

This meter is always ready for instant use. To measure illumination on a horizontal plane it is only necessary to open cover, hold instrument in a horizontal position with the cell or light target lying in its socket and then take the readings. The toggle switch simplifies switching to any of the 3 meter ranges so as to give a good scale deflection for any value of light intensity within maximum range of instrument.

Assembled in a moulded black bakelite carrying case equipped with hinged cover and strap handle. Length of case, 7 inches; height, 3½ inches; width, 2¼ inches.

Weight, 1.8 pounds.

Model **614**....................................each **$50.00**

Model 603 Weston Portable Direct Reading Illumination Meters

To measure light intensities with this foot-candle meter it is only necessary to turn the searching unit to the light to be measured and then read its value in foot-candles directly on the 50-division uniformly divided scale.

The Photronic cell is instantaneous in its response to light variations; color response closely approximates that of the human eye.

Calibration of the scale is permanent.

Dimensions, 8¼x8¾x4½ inches. Weight, 7 pounds.

3-Range Type

Consists of an accurate indicating instrument mounted in a carrying case and a searching unit or light target with a 6-foot cable permanently attached to instrument.

Three ranges, 0 to 10, 0 to 50 and 0 to 250 foot-candles are selected by means of a 3-position switch.

Model **603**, 3-Range Type........................each **$95.00**

6-Range Type—For Street Lighting Work

Similar to the 3-range type. Six ranges: 0–1, 0–2.5, 0–5 0–25, 0–100 and 0–500 foot-candles. Readings are possible to as low as .02 foot-candle on 1 foot-candle range.

A bank of 16 Photronic photo-electric cells are permanently mounted in hinged cover and act as a light target for the 3 low ranges. For these ranges it is simply necessary to slip off cover and plug the 10-foot flexible cord into socket connecting the instrument. The 3 high ranges utilize a standard 2-cell light target which plugs into the instrument in a similar manner. All ranges selected through a 6-position switch on instrument panel.

Model **603**, 6-Range Type........................each **$300.00**

Weston Switchboard D.C. Instruments

Models 24, 57 and 251

Accurate within 1%. Permanent magnet moving coil type; magnetically shielded.

Model 251 harmonizes with Models 167, 214, 215, 216, 226 and 261 instruments.

Prices cover instruments finished in dull black. Models 24 and 57 have cast iron cases; Model 251, pressed steel. Regularly supplied in surface type, back connected cases. Flush type in Models 24 and 57 can be supplied at no extra cost.

Dimensions and Weights

Model		**24**	**57**	**251**
Diameter at Base	inches	7¼	9⁹⁄₁₆	9⅝
Projection from Panel	inches	3³¹⁄₃₂	4¹³⁄₃₂	4
Length of Scale	inches	5³⁄₃₂	6½	6½
Approximate Weight	pounds	9	14	11

Ammeters

Models 24 and 57 for 75 amperes or less supplied with self-contained shunts. External shunt type may be obtained at no extra cost. All ranges in Model 251 with external shunts.

Range	Scale Divisions	Model **24** Each	Model **57** Each	Model **251** Each
1	50	**$44.50**	**$55.50**	**$55.50**
5	50	**44.50**	**55.50**	**55.50**
10	50	**44.50**	**55.50**	**55.50**
15	75	**44.50**	**55.50**	**55.50**
25	50	**44.50**	**55.50**	**55.50**
50	50	**44.50**	**55.50**	**55.50**
75	75	**44.50**	**55.50**	**55.50**
80	40	**44.50**	**55.50**	**55.50**
100	50	**44.50**	**55.50**	**55.50**
130	65	**44.50**	**55.50**	**55.50**
150	75	**44.50**	**55.50**	**55.50**
200	40	**44.50**	**55.50**	**55.50**
250	50	**44.50**	**55.50**	**55.50**
300	60	**45.25**	**56.25**	**56.25**
400	40	**47.00**	**58.00**	**58.00**
500	50	**48.75**	**59.75**	**59.75**
600	60	**50.50**	**61.50**	**61.50**
750	75	**53.00**	**64.00**	**64.00**
1000	50	**59.00**	**70.00**	**70.00**
1200	60	**62.00**	**73.00**	**73.00**
1500	75	**68.00**	**79.00**	**79.00**
2000	40	**72.00**	**83.00**	**83.00**
2500	50	**81.00**	**92.00**	**92.00**
3000	60	**89.00**	**100.00**	**100.00**

Voltmeters

Voltmeters have a sensitivity of approximately 80 ohms per volt. Self-contained up to 750 volts. Models 24 and 57 have normal indices operated from the outside of the case.

6	60	**$39.00**	**$50.00**	**$50.00**
10	50	**39.00**	**50.00**	**50.00**
15	75	**39.00**	**50.00**	**50.00**
25	50	**39.00**	**50.00**	**50.00**
50	50	**39.00**	**50.00**	**50.00**
75	75	**39.00**	**50.00**	**50.00**
120	60	**39.00**	**50.00**	**50.00**
130	65	**39.00**	**50.00**	**50.00**
150	75	**39.00**	**50.00**	**50.00**
250	50	**43.00**	**54.00**	**54.00**
300	60	**43.00**	**54.00**	**54.00**
600	60	**51.00**	**62.00**	**62.00**
750	75	**55.00**	**66.00**	**66.00**

Wattmeters, Power Factor Meters, Frequency Meters and Synchroscopes

These instruments, representing a complete line for the conventional switchboard, are available in designs matching the voltmeters and ammeters listed above.

Prices and complete bulletins furnished on application.

Weston Switchboard A.C. Instruments
Models 151, 156 and 261

Accurate within 1%. Movable iron type; magnetically shielded. Model 261 forms a part of a complete matched line including voltmeters, ammeters, wattmeters, power factor meters, frequency meters and synchroscopes, details of which will be furnished on request.

Prices cover instruments finished in dull black. Models 151 and 156 have cast iron cases; Model 261, pressed steel. Regularly supplied in surface type back connected cases. Flush type voltmeters in Models 151 and 156, at no extra cost. Flush type ammeters with ranges of 5 amperes or less supplied without extra charge, but for ranges above 5 amperes an extra charge of $5.75 each will be made.

Power consumption: Voltmeters on 115 volts, 6.8 watts; on 25 or 60 cycles, 6.8 volt-amperes. Ammeters on 5 amperes, 1.1 watts; on 25 cycles, 1.1 volt-amperes; on 60 cycles, 1.4 volt-amperes.

Dimensions and Weights

Model		151	156	261
Size at Base	inches	9 9/16	7 1/4	9 5/8
Projection from Panel	inches	3 3/32	3 7/32	4
Length of Scale	inches	6 3/16	5 3/32	6 1/2
Approximate Weight	pounds	10	8	9

Ammeters

Ammeters are for use on frequencies up to 500 cycles per second.

Model 151 or 156 ammeter can be furnished with self-contained capacities up to and including 500 amperes for use on potentials to 2300 volts. Model 261 ammeter is listed in one range only. This model is employed generally with current transformers, and the price shown covers instruments for currents up to 10 amperes, with scales figured to correspond to the transformers with which employed.

Range	Scale Divisions Models 151 and 261	Model 156	Model 151 Each	Model 156 Each	Model 261 Each
1	100	50	$46.00	$35.00	.....
2	100	40	46.00	35.00	.....
5	50	50	*46.00	*35.00	*$46.00
10	100	50	46.00	35.00	.....
15	75	75	50.00	39.00	.....
20	100	40	50.00	39.00	.....
25	50	25	50.00	39.00	.....
30	60	30	50.00	39.00	.....
40	40	40	52.00	41.00	.....
50	50	50	52.00	41.00	.....
75	75	75	52.00	41.00	.....
100	100	50	55.00	44.00	.....
150	75	75	58.00	47.00	.....
200	100	40	61.00	50.00	.....
250	50	25	64.00	53.00	.....
300	60	30	67.00	56.00	.....
400	40	40	75.00	64.00	.....
500	50	50	75.00	64.00	.....

*Ranges slightly higher or lower than 5 amperes as required when maximum scale value is somewhat larger or smaller than the rated primary capacity of the current transformer, can be supplied at no extra charge.

Voltmeters

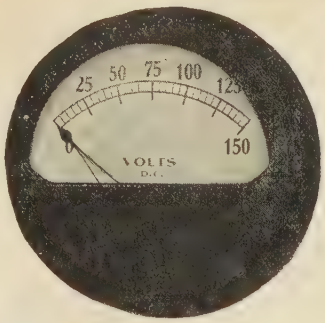
For use on frequencies up to 133 cycles per second. Available for 500-cycle service at an extra cost of $4.00.

With external resistors for ranges above 300 volts.

A special percentage ground indicator may be supplied for indicating grounds and their intensities on 3-phase ungrounded systems; information on application.

75	75	75	$48.00	$37.00	$48.00
100	100	50	48.00	37.00	48.00
130	65	65	48.00	37.00	48.00
150	75	75	48.00	37.00	48.00
250	50	25	51.00	40.00	51.00
300	60	30	52.00	41.00	52.00
500	50	50	57.00	46.00	57.00
600	60	60	60.00	49.00	60.00
750	75	75	64.00	53.00	64.00

Model 252 Weston Switchboard D.C. Instruments



Accurate within 1%. Permanent magnet moving coil type; magnetically shielded. Forms part of a complete matched line including voltmeters, ammeters, wattmeters, power factor meters, frequency meters and synchroscopes, details of which will be furnished upon request.

With pressed steel case, dull black finish. Surface type, back connected.

This instrument, with suitable exploring coils, can be used as an electric resistance thermometer; information on application.

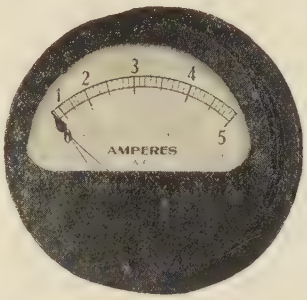
Ammeters provided with external shunts.

Voltmeters self-contained up to 300 volts; sensitivity, approximately 80 ohms per volt. Voltmeters may be provided with a second but lower range at $5.50 extra.

Diameter at base, 7 21/32 inches; projection from panel, 4 inches; length of scale, 5 3/32 inches. Approx. wt., 9 lbs.

Range	Scale Divs.	Ammeters Each	Voltmeters Each	Range	Scale Divs.	Ammeters Each	Voltmeters Each
1	50	$44.50	.....	200	40	$44.50	.....
5	50	44.50	.....	250	50	44.50	$43.00
6	30	.....	$39.00	300	30	45.25	43.00
10	50	44.50	39.00	400	40	47.00	.....
15	30	44.50	39.00	500	50	48.75	.....
25	50	44.50	39.00	600	30	50.50	51.00
50	50	44.50	39.00	750	30	53.00	55.00
75	30	44.50	39.00	1000	50	59.00	.....
80	40	44.50	.....	1200	60	62.00	.....
100	50	44.50	.....	1500	30	68.00	.....
120	60	.....	39.00	2000	40	72.00	.....
130	65	44.50	39.00	2500	50	81.00	.....
150	30	44.50	39.00	3000	30	89.00	.....

Model 260 Weston Switchboard A.C. Instruments



Accurate within 1%. Movable iron type; magnetically shielded. Surface type back connected case of pressed steel, dull black finish.

This instrument forms a part of a complete matched line, details of which will be furnished on request.

Power consumption: Voltmeters on 115 volts, 6.8 watts; on 25 or 60 cycles, 6.8 volt-amperes. Ammeters on 5 amperes, 1.1 watts; on 25 cycles, 1.1 volt-amperes; on 60 cycles, 1.4 volt-amperes.

Size at base, 7 21/32 inches; projection from panel, 4 1/32 inches; length of scale, 5 3/32 inches. Weight, 8 pounds.

Ammeters

Ammeters are for use on frequencies up to 500 cycles per second. Model 260 ammeter listed in one range only; employed generally with current transformers; price shown covers instruments for currents up to 10 amperes with scales figured to correspond to transformers with which employed.

Ranges slightly higher or lower than 5 amperes as required when maximum scale value is somewhat larger or smaller than the rated primary capacity of the current transformer, can be supplied at no extra charge.

Model **260** ..... each **$35.00**

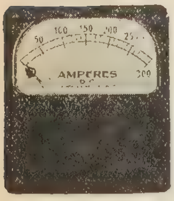
Voltmeters

Voltmeters are for use on frequencies up to 133 cycles per second. For 500-cycle service, $4.00 extra.

With external resistors for ranges above 300 volts.

Volts	Scale Divs.	Each	Volts	Scale Divs.	Each	Volts	Scale Divs.	Each
75	75	$37.00	150	30	$37.00	500	50	$46.00
100	50	37.00	250	25	40.00	600	60	49.00
130	65	37.00	300	30	41.00	750	75	53.00

Model 610 Weston Switchboard D.C. Instruments



Accurate within 1%. Permanent magnet moving coil type; magnetically shielded. Harmonizes with all Model 610 instruments.

With pressed steel case, dull black finish. Flush type, back connected.

Model 610 instrument has 2 Mazda 6-volt (No. 40 T-3) lamps that provide indirect full scale illumination free from shadows. Lamps are operated from an independent circuit and may be conveniently replaced by removing 4 screws which hold the bakelite front.

Ammeters provided with external shunts.

Voltmeters have a sensitivity of 100 ohms and are self-contained at this sensitivity up to 300 volts; from 300 to 500 volts self-contained the sensitivity is 200 ohms per volt. Ranges from 500 to 1000 volts employ a Type 12 No. 1 resistance box at 100 ohms per volt. Voltmeters provided with a second but lower range at $5.50 extra.

Size at base, 4x4½ inches; projection from panel, ⅞ inch; length scale, 3½ inches. Weight, 2 pounds.

Range	Scale Divs.	Ammeters Each	Voltmeters Each	Range	Scale Divs.	Ammeters Each	Voltmeters Each
1	50	$44.50	......	200	40	$44.50	......
5	50	44.50	......	250	50	44.50	$43.00
6	30	.....	$39.00	300	30	45.25	43.00
10	50	44.50	39.00	400	40	47.00	.....
15	30	44.50	39.00	500	50	48.75	.....
25	50	44.50	39.00	600	30	50.50	51.00
50	50	44.50	39.00	750	30	53.00	55.00
75	30	44.50	39.00	1000	50	59.00	.....
80	40	44.50	.....	1200	60	62.00	.....
100	50	44.50	.....	1500	30	68.00	.....
120	60	.....	39.00	2000	40	72.00	.....
130	65	44.50	39.00	2500	50	81.00	.....
150	30	44.50	39.00	3000	30	89.00	.....

Model 610 Weston Switchboard A.C. Instruments

Accurate within 1%. Movable iron type; magnetically shielded. Flush type back connected case of pressed steel, dull black finish. Has moulded bakelite front.

With 2 Mazda 6-volt (No. 40 T-3) lamps that provide indirect full scale illumination free from shadows. The lamps are operated from an independent circuit and may be conveniently replaced by removing 4 screws which hold bakelite front.

Power consumption: Voltmeters on 115 volts, 3. watts; on 25 or 60 cycles, 3. volt-amperes. Ammeters on 5 amperes, 1.1 watts; on 25 cycles, 1.1 volt-amperes; on 60 cycles, 1.4 volt-amperes.

Size at base, 4x4½ inches; projection from panel, ⅞-inch; length scale, 3½ inches. Weight, 2 pounds.

Ammeters

Ammeters are for use on frequencies up to 500 cycles per second. Listed in one range only; employed generally with current transformers; price shown covers instruments for currents up to 10 amperes with scales figured to correspond to transformers with which employed.

Ranges slightly higher or lower than 5 amperes as required when maximum scale value is somewhat larger or smaller than the rated primary capacity of the current transformer, can be supplied at no extra charge.

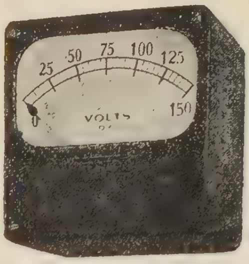
Model **610**.................................each **$35.00**

Voltmeters

Voltmeters are for use on frequencies up to 133 cycles per second. For 500-cycle service, $4.00 extra. With external resistors for ranges above 300 volts. For ranges between 300 and 750 volts a Type 12 No. 1 resistance box mounted on studs at rear of instrument, is provided.

Volts	Scale Divs.	Each	Volts	Scale Divs.	Each	Volts	Scale Divs.	Each
75	75	$37.00	150	30	$37.00	500	50	$46.00
100	50	37.00	250	25	40.00	600	60	49.00
130	65	37.00	300	30	41.00	750	75	53.00

Model 502 Weston Switchboard D.C. Instruments



Accurate within 1%. Permanent magnet moving coil type; magnetically shielded. Harmonizes with Models 496, 497, 498, 499, 500 and 501 instruments.

With pressed steel case, dull black finish. Surface type, back connected cases. Flush type model can be supplied at $4.00 extra.

This instrument, with suitable exploring coils, can be used as an electric resistance thermometer; information on application.

Ammeters are provided with external shunts.

Voltmeters have a sensitivity of approximately 100 ohms per volt and are self-contained up to 750 volts. Voltmeters may be provided with a second but lower range at an additional cost of $5.50.

Size at base, 5¾x6 inches; projection from panel, 4½ inches; length scale, 5⅛ inches. Weight, 8 pounds.

Range	Scale Divs.	Ammeters Each	Voltmeters Each	Range	Scale Divs.	Ammeters Each	Voltmeters Each
1	50	$44.50	.....	200	40	$44.50	.....
5	50	44.50	.....	250	50	44.50	$43.00
6	30	.....	$39.00	300	30	45.25	43.00
10	50	44.50	39.00	400	40	47.00	.....
15	30	44.50	39.00	500	50	48.75	.....
25	50	44.50	39.00	600	30	50.50	51.00
50	50	44.50	39.00	750	30	53.00	55.00
75	30	44.50	39.00	1000	50	59.00	.....
80	40	44.50	.....	1200	60	62.00	.....
100	50	44.50	.....	1500	30	68.00	.....
120	60	.....	39.00	2000	40	72.00	.....
130	65	44.50	39.00	2500	50	81.00	.....
150	30	44.50	39.00	3000	30	89.00	.....

Model 496 Weston Switchboard A.C. Instruments

Accurate within 1%. Movable iron type; magnetically shielded. Surface type back connected case of pressed steel, dull black finish. For flush type instrument, add $4.00.

Power consumption: Voltmeters on 115 volts, 6.8 watts; on 25 or 60 cycles, 6.8 volt-amperes. Ammeters on 5 amperes, 1.1 watts; on 25 cycles, 1.1 volt-amperes; on 60 cycles, 1.4 volt-amperes.

Size at base, 5¾x6 inches; projection from panel, 4¼ inches; length of scale, 5⅛ inches. Weight, 6 pounds.

Ammeters

Ammeters are for use on frequencies up to 500 cycles per second. Listed in one range only; employed generally with current transformers; price shown covers instrument for currents up to 10 amperes with scales figured to correspond to transformers with which employed.

Ranges slightly higher or lower than 5 amperes as required when maximum scale value is somewhat larger or smaller than the rated primary capacity of the current transformer, can be supplied at no extra charge.

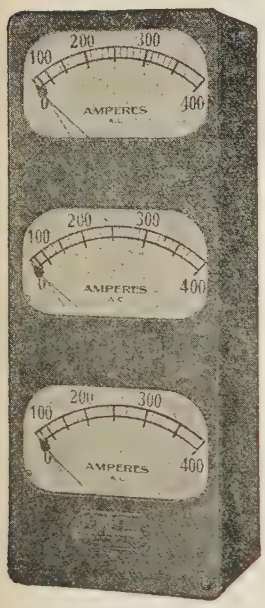
Model **496**.................................each **$35.00**

Voltmeters

Voltmeters are for use on frequencies up to 133 cycles per second. For 500-cycle service, $4.00 extra. Model 496 requires an external resistor for all ranges. For ranges up to 300 volts, resistor is mounted on studs at rear of instrument; for ranges between 300 and 750 volts a Type 3 No. 2 box is employed; for ranges above 750 volts, the use of a potential transformer is recommended.

Volts	Scale Divs.	Each	Volts	Scale Divs.	Each	Volts	Scale Divs.	Each
75	75	$37.00	150	30	$37.00	500	50	$46.00
100	50	37.00	250	25	40.00	600	60	49.00
130	65	37.00	300	30	41.00	750	75	53.00

Model 501 Weston Switchboard A.C. Ammeters



For use on frequencies up to 500 cycles per second. Listed in one range only; employed generally with current transformers, and price shown covers instrument for currents up to 10 amperes with scales figured to correspond to transformers with which employed.

Triplex instruments supplied in any combination of 3 rectangular a.c. or d.c. switchboard instruments; prices on application.

Accurate within 1%. Movable iron type; magnetically shielded. Surface type back connected case of pressed steel, dull black finish.

Power consumption: Voltmeters at 115 volts, 6.8 watts; on 25 or 60 cycles, 6.8 volt-amperes. Ammeters on 5 amperes, 1.1 watts; on 25 cycles, 1.1 volt-amperes; on 60 cycles, 1.4 volt-amperes.

Ranges slightly higher or lower than 5 amperes as required when maximum scale value is somewhat larger or smaller than rated primary capacity of current transformer, can be supplied at no extra charge.

Size at base, 5¾x15½ inches; projection from panel, 4¼ inches; length of scale, 5⅛ inches. Weight, 17 pounds.

Model 501 ..... each **$100.00**

Model 600 Weston Small Panel Microammeters

Permanent magnet moving coil type. Regularly furnished in flush type bakelite case; also available with flush type metal case.

Scales are hand calibrated and basically have an accuracy of 2% except in rectifier type where percentage accuracy is about 5% due to inherent properties of rectifier.

Rectifier instruments can be made with a high sensitivity, and for many laboratory and field measurements, voltmeters with a resistance of as high as 10000 ohms per volt can be had. Such instruments can be used for power level measurements across high resistance loads and for any other position where extremely small energy drain is required. Similarly, d.c. instruments may be supplied in this model with sensitivities as high as 30000 ohms per volt.

		Bakelite	Metal
Case Material			
Flange Diameter	inches	3½	3¼
Body Diameter	inches	2 13/16	2 9/16
Body Depth	inches	1 3/64	1 3/64
Length of Scale	inches	2 3/8	2 3/8
Approximate Weight	pounds	1	1

D.C. Microammeters

Range	Each	Resist. Ohms	Scale Divs.	Range	Each	Resist. Ohms	Scale Divs.
30	$26.00	2000	60	200	$14.25	65	40
50	23.50	2000	50	300	14.25	55	60
75	23.50	1750	75	500	14.25	30	50
100	21.00	1300	50	...	.....	....	..

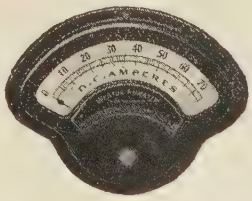
Rectifier Type A.C. Microammeters

*100	$26.00	3700	50	250	$19.25	2300	50
200	19.25	2500	40	...	.....	....	..

*Despite its low range, this instrument is subject to a temperature error of but 1% per degree Centigrade.

Weston Switchboard D.C. Instruments

Models 267, 269, 271 and 273 Fan-Shaped Ammeters, Milliammeters and Voltmeters



Permanent magnet moving coil type; magnetically shielded.

In surface type pressed steel cases with back connections, dull black finish, at prices shown. Model 269, with bakelite case at a surcharge of $3.50 above regular price. When a bakelite case is used, instrument is not shielded.

Dimensions and Weights

Model		267	269	271	273
Width	in.	4 3/32	5 5/8	7 7/8	9 5/16
Height	in.	3 3/8	4 7/16	6 1/4	7 13/32
Projection from Panel	in.	1 3/32	1 13/32	1 3/4	2 1/16
Length of Scale	in.	2½	4	6	7 19/32
Approximate Weight	lbs.	1	1½	4	5

Ammeters

Amperes	Scale Divisions Models 267-269-271	Scale Divisions Model 273	Model 267 Each	Model 269 Each	Model 271 Each	Model 273 Each
1	50	100	$21.75	$27.00	$38.50	$49.50
1.5	75	75	21.75	27.00	38.50	49.50
2	40	100	21.75	27.00	38.50	49.50
3	60	60	21.75	27.00	38.50	49.50
5	50	50	21.75	27.00	38.50	49.50
10	50	100	21.75	27.00	38.50	49.50
15	75	75	21.75	27.00	38.50	49.50
20	40	100	21.75	27.00	38.50	49.50
25	50	50	21.75	27.00	38.50	49.50
30	60	60	21.75	27.00	38.50	49.50
50	50	50	27.25	27.00	38.50	49.50
75	75	75	27.25	32.50	38.50	49.50
100	50	100	27.25	32.50	38.50	49.50
150	75	75	27.25	32.50	38.50	49.50
200	40	100	27.25	32.50	38.50	49.50
300	60	60	28.00	33.25	39.25	50.25
400	40	40	29.75	35.00	41.00	52.00
500	50	50	31.50	36.75	42.75	53.75
750	75	75	35.75	40.75	47.00	58.00
1000	50	100	41.75	45.75	53.00	64.00
1500	75	75	50.75	54.75	62.00	73.00
2000	40	100	54.75	58.75	66.00	77.00
3000	60	60	70.75	75.75	83.00	94.00

Models 267 and 269 have self-contained shunts up to and including 30 and 50 amperes respectively—above these ranges, with external 100 MV. shunts. Models 271 and 273 with external 50 MV. shunts. Prices include shunts.

Milliammeters

Milliamperes						
1	50	100	$22.75	$29.00	$34.00	$45.00
1.5	75	75	22.75	29.00	34.00	45.00
3	60	60	22.75	29.00	34.00	45.00
5	50	50	21.75	28.00	33.00	44.00
10	50	100	21.75	28.00	33.00	44.00
15	75	75	21.75	28.00	33.00	44.00
20	40	100	21.75	28.00	33.00	44.00
25	50	50	21.75	28.00	33.00	44.00
50	50	50	21.75	28.00	33.00	44.00
75	75	75	21.75	28.00	33.00	44.00
100	50	100	21.75	28.00	33.00	44.00
150	75	75	21.75	28.00	33.00	44.00
200	40	100	21.75	28.00	33.00	44.00
250	50	50	21.75	28.00	33.00	44.00
300	60	60	21.75	28.00	33.00	44.00
500	50	50	21.75	28.00	33.00	44.00

Model 267 ranges above 50 milliamperes are shunted and have a drop of approximately 100 millivolts; Model 269 above 25 milliamperes, 100 millivolts; Model 271 above 25 milliamperes, 50 millivolts; Model 273 above 20 milliamperes, 50 millivolts.

Voltmeters

Volts						
3	60	60	$21.75	$28.00	$33.00	$44.00
8	40	80	21.75	28.00	33.00	44.00
10	50	100	21.75	28.00	33.00	44.00
15	75	75	21.75	28.00	33.00	44.00
20	40	100	21.75	28.00	33.00	44.00
25	50	50	21.75	28.00	33.00	44.00
30	60	60	21.75	28.00	33.00	44.00
50	50	50	21.75	28.00	33.00	44.00
75	75	75	21.75	28.00	33.00	44.00
100	50	100	21.75	28.00	33.00	44.00
130	65	65	21.75	28.00	33.00	44.00
150	75	75	21.75	28.00	33.00	44.00
200	40	100	*23.50	29.75	34.75	45.75
250	50	50	*25.00	31.25	36.00	47.00
300	60	60	*27.00	33.25	37.00	48.00
600	60	60	*31.50	*37.75	*45.00	*56.00

Approximate resistance in ohms per volt: Model 267, 60; Model 269, 75; Model 271, 100; Model 273, 100.

*Supplied with external resistor.

Millivoltmeters are also available in the fan-shaped instruments. Prices upon application.

Model 301 Weston 3¼-Inch Panel Instruments

D.C. Model

Permanent moving coil type. Accurate within 2%.

A.C. Model—Rectifier Type

High sensitivity a.c. instruments obtained by using a full-wave copper oxide rectifier with a d.c. movement. Excellent damping, even scale characteristics and high overload capacity. Accurate within 5%.

D.C. Voltmeters

Approx. Resistance in Ohms per Volt: 1 to 40 V., 62; 50 to 150 V., 200; 200 V., 250; 250 V., 300; 300-500 V., 666; 600 to 2000 V., 66; Above 2000 V., 100

Range	Each	Divs.	Range	Each	Divs.	Range	Each	Divs.
3	$9.00	60	30	$9.00	60	500	$19.50	50
5	9.00	50	50	9.00	50	1000*	28.50	50
8	9.00	40	100	10.00	50	1500*	36.50	75
10	9.00	50	150	11.25	75	2000*	45.00	40
15	9.00	75	200	13.00	40	3000*	61.00	60
20	9.00	40	300	16.50	60	.....	.....	..

*Supplied with external resistor.

Resistance, 1000 Ohms per Volt

Range	Each	Divs.	Range	Each	Divs.	Range	Each	Divs.
50	$12.00	50	500	$17.25	50	500/100**	$15.75	50
100	12.50	50	1000	21.00	50	750/250/10**	17.50	75-50
200	14.00	40	200/8**	15.00	50	750/250/100	22.50	75-50
300	15.00	60	250/50**	15.00	50	50/10/5		

**Self-contained for low range. External box for other ranges. ***Spool Resistors supplied for all but low range.

D.C. Ammeters

Self-contained up to 50 amperes inclusive—drop 50 MV ±5%.

Range	Each	Divs.	Range	Each	Divs.	Range	Each	Divs.
1	$9.00	50	10	$9.00	50	2–0–2	$9.00	40
1.5	9.00	75	15	9.00	75	5–0–5	9.00	50
2	9.00	40	20	9.00	40	10–0–10	9.00	40
3	9.00	60	30	9.00	60	20–0–20	9.00	40
5	9.00	50	50	9.00	50	.....	....	..

D.C. Milliammeters

Milliammeters above 30 MA are shunted—drop approximately 100 MV.

1	$10.00	50	15	$9.00	75	200	$9.00	40
1.5	10.00	75	20	9.00	40	300	9.00	60
2	10.00	40	30	9.00	60	500	9.00	50
3	10.00	60	50	9.00	50	150/15†	14.00	75
5	9.00	50	100	9.00	50	150/30†	14.00	60
10	9.00	50	150	9.00	75	.....	.....	..

†Double range milliammeters are 3 binding post type, self-contained.

D.C. Microammeters

200	$14.25	40	500	$14.25	50	.....	.....	..

Adjusted for use in horizontal or 45° position.

Ohmmeters

These ohmmeters are independent of battery voltage.

Ohm Scale	Each	Battery Voltage	Rheostat Ohms	Ohm Scale	Each	Battery Voltage	Rheostat Ohms
0– 1000	$10.50	1.5	100	0– 500000	$13.50	15	400
0– 10000	10.50	4.5	250	0–2000000	15.00	90	400
0–100000	13.50	4.5	400	.....	.....	..	...

Rectifier Type Voltmeters

Volts	Scale Divs.	1000 Ohms per Volt Each	‡2000 Ohms per Volt Each	Volts	Scale Divs.	1000 Ohms per Volt Each	‡2000 Ohms per Volt Each
1	50	.....	$19.25	50	50	$17.00	$19.75
1.5	75	.....	19.25	100	50	17.50	21.50
3	60	$17.00	19.25	150	75	19.00	23.00
5	50	17.00	19.25	300	60	20.00	.....
15	75	17.00	19.25	...	..	.....	.....

‡Should be used in horizontal or 45° position.

Rectifier Type Milliammeters

Milliamperes	0.5	1	2	5
Scale Divs	50	50	40	50
Each	$19.25	15.00	15.00	14.00

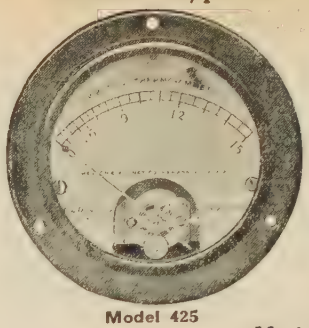
A.C. Microammeters

Use in horizontal or 45° positions.

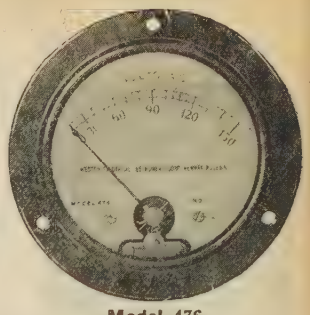
500 Microamperes, 50 Scale Divs.....each **$19.30**

Bakelite cases should be specified for ammeters and milliammeters when used on circuits above 300 volts when it is not possible to connect instrument in grounded side of line. Bakelite case supplied at no additional cost.

Weston 3¼-Inch Panel Instruments



Model 425



Model 476

Model 425

Thermocouple type for a.c. including radio frequencies. Accurate within 2%.

Bakelite cases should be specified for ammeters and milliammeters when used on circuits above 300 volts when it is not possible to connect instrument in grounded side of line. Bakelite case supplied at no additional cost.

Thermocouple Type Ammeters

Power consumption, 1 to 4 amperes inclusive, varies from .2 to .4 watt per amperes approximately; 5 amperes and above, .15 watt per ampere.

Amps.	Each	Amps.	Each	Amps.	Each	Amps.	Each
1	$16.00	2	$16.00	5	$16.00	15	$16.00
1.5	16.00	3	16.00	10	16.00	20	16.00

Thermocouple Milliammeters

Milli-Amps.	Each	Approx. Resist. Ohms	Milli-Amps.	Each	Approx. Resist. Ohms	Milli-Amps.	Each	Approx. Resist. Ohms
10*	$50.00	100	50*	$50.00	5	150	.....	...
20*	50.00	26.5	100	.....	.	250	$18.00	1.8
25	.....	....	120**	18.00	5.2	500	18.00	1.3

*Vacuum couple type. **For horizontal or not more than 45° mounting—all others for vertical mounting.

Galvanometer

Accurate within 2 scale divisions. For horizontal or 45° mounting.

115 Milliamperes, **5.2** Ohms.....each **$18.00**

Model 476

Movable iron type for a.c. only. Accurate within 2%.

A.C. Voltmeters

Volts	Each	Approx. Ohms Per Volt	Volts	Each	Approx. Ohms Per Volt
1.5	$9.00	3	250	$14.50	167
3	9.00	6	300	16.50	167
5	9.00	10	500	19.50	167
8	9.00	10.5	750***	23.50	167
10	9.00	14	1000***	28.00	167
15	9.00	14	150/8/4†	16.00	67/10/10
20	9.00	26.3	150/15/3†	16.00	67/10/10
30	9.00	26.3	300/8/4†	18.00	143/10/10
50	9.00	52	750/150/16/8/4‡	21.00	67/67/10/10/10
100	9.00	105	1000/200/16/8/4§	25.00	50/50/10/10/10
150	11.25	105	.....	.....	.....

***Supplied with external multiplier box.

†Self-contained, four binding post instrument.

‡Four binding post instrument self-contained, for 150/8/4 volts.

External spool resistors for 750/16 volt ranges.

§Three binding post instrument self-contained for 100/4 volts.

External spool resistors (7) for 1000/200/16/8 volts.

A.C. Ammeters

Amps.	Each	Approx. Total Resist.	Amps.	Each	Approx. Total Resist.	Amps.	Each	Approx. Total Resist.
1	$9.00	.2030	5	$9.00	.010	30	$9.00	.00070
1.5	9.00	.082	10	9.00	.0058	50	9.00	.00057
2	9.00	.05	15	9.00	.00219	..	....	.....
3	9.00	.024	20	9.00	.00162	..	....	.....

A.C. Milliammeters

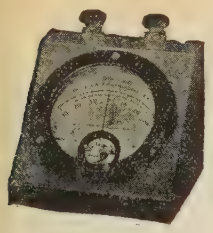
Milli-Amps.	Each	Approx. Total Resist.	Milli-Amps.	Each	Approx. Total Resist.	Milli-Amps.	Each	Approx. Total Resist.
15	$9.00	2000	50	$9.00	175	250	$9.00	4.7
25	9.00	690	100	9.00	28	500	9.00	1.1

Condenser Meter

Reads capacity in microfarads. Movable iron type; accurate within 3% when used on voltage for which they are adjusted. Supplied with an external box.

15–1.5 Microfarads, **30** Divs.....each **$29.00**

Model 375 Weston Student Galvanometers



For student use in school laboratories and wherever a d.c. galvanometer of extreme sensitivity is not essential. Permanent magnet moving coil type.

Has a sensitivity of approximately 22 microamperes per division; resistance, about 23 ohms. Scale is zero-center with 60 divisions; calibrated 30–0–30 in millimeter divisions. As a galvanometer for portable use, instrument is mounted in 45° angle base; also without base for mounting in apparatus or on panels.

Dimensions: With mounting base, $3\frac{3}{4}$x$3\frac{31}{64}$x$3\frac{17}{32}$ inches; without mounting base—case, $3\frac{1}{4}$ inches; body, $2\frac{9}{16}$ inches. Scale length, $2\frac{3}{8}$ inches.

Model **375**, with Mounting Base, Weight 12 Oz. . .each **$13.00**
Model **375**, without Mounting Base, Wt. 8 Oz. . . .each **10.00**

No. 24 Sterling Pocket Ammeters

This pocket ammeter is universally used for testing dry cells. It has 0-35 ampere scale, 1-ampere divisions.

This is a durable instrument, having correct scale calibration and a clearly marked dial.

Full nickel finish.

Packed in individual boxes and supplied in a standard package containing 10 boxes. Shipping weight, 3 pounds.

No. **24**.....each **$1.00**

Sterling Pocket Voltammeters

Packed 1 in a box, 10 boxes in standard package. Shipping weight, 3 pounds.

No. 44

Tests amperage of dry cell A batteries and voltage of both dry cell and storage A batteries; 0-35 amp. scale, 1-amp. divisions; 0-10 volt scale, $\frac{1}{5}$-volt divisions.

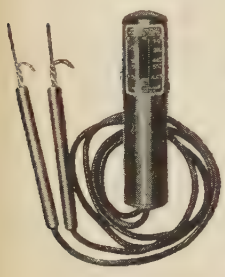
No. **44**.....each **$1.50**

No. 45

Tests amperage of dry cell A batteries and voltage of either dry or storage B batteries up to 50 volts; 0-35 ampere scale, 1-ampere divisions; 0-50 volt scale, 1-volt divisions.

No. **45**.....each **$3.00**

Square D Voltage Testers



This voltage tester does not require lamps and operates on a.c. or d.c., indicating the voltage of either type. There is no danger of breaking and it will withstand hard usage.

Simple to operate. Place one wire in each side of the circuit and the indicator shows what the voltage is. Sharp metal points on end of long rubber-covered leads permits piercing insulation without damaging it. Fibre handles insulate the lead wires.

Can be carried in pocket.

Cat. No. 5000, Maximum Voltage, 600 D.C.....each **$10.20**
Cat. No. 5002, Voltage Tester Case.....each **1.00**

Test-O-Lites

The Test-O-Lite contains two electrodes in a Neon gas filled bulb, each of which is connected in series with a suitable protecting resistor.

It will indicate voltage—a dim glow is shown when testing 110 volts, and on higher voltages up to 550 volts the glow is brighter in proportion.

Indicates whether a.c. or d.c. If a.c. both electrodes will glow, and if d.c. only one will glow and at the same time indicate the negative pole of the circuit.

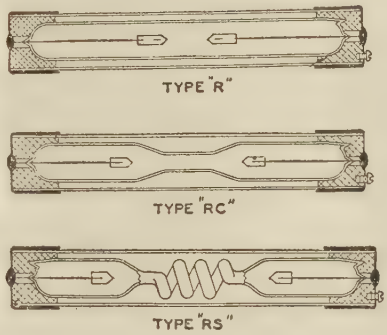
Detects the live and ground wires. One can test whether a conductor has tension against ground or not by touching one of the leads with the hand.

Tests resistance leaks. Can be used as a pilot light if connected permanently to any circuit.

Furnished in a bakelite casing. Is no bigger than a fountain pen.

Test-O-Lite.....each **$1.50**

Brach Fixed Neon High Voltage Indicators



Consists of a sensitive Neon tube enclosed in a glass protecting case with metal ferrules on each end connected to electrodes of the tube.

Designed for permanent installation. With sufficiently high voltage indicator will give an indication if only one end is attached to line. Greater brilliance is obtained if a plate or other metal is attached to free end giving greater capacity to electrodes.

Wherever practical the indicator may be placed directly across a high voltage line, provided sufficient resistance is placed in series with tube to limit current to only a few milliamps. Another type of indicator has been developed recently for use across a line (or from line to ground) with a suitable resistance in series.

Also furnished when specified, at $1.00 extra, with metal strap arranged to act as condenser plate and support one end of tube.

Type R.—Neon tube is a straight tube with electrodes about $\frac{3}{4}$-inch apart. Will give an indication on 500 volts.
Type R.....each **$2.50**

Type RC.—Neon tube is straight but has a constriction between electrodes. Will give an indication on 500 volts.
Type RC.....each **$2.80**

Type RS.—Neon tube is of small bore tubing wound into a spiral. This type gives more illumination than Types R and RC when voltage is sufficiently high to operate same. Requires about 3000 volts for an indication.
Type RS.....each **$3.70**

Brach Safe-T-Glow High Tension Detectors

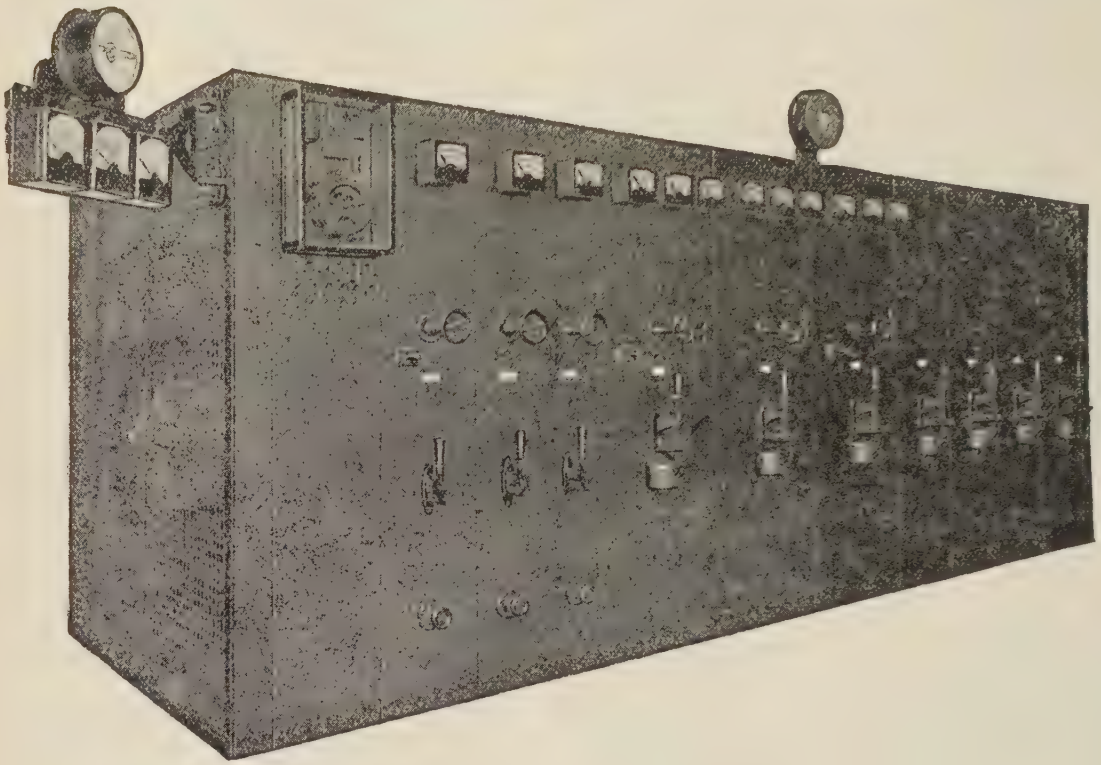
Safe-T-Glow consists of a sensitive Neon tube mounted on cushion supports, the light of this tube being amplified by a mirror reflector. It is sensitive to the presence of high tension current and will start to glow at 2000 volts when exposed terminal is held in contact with high tension wire. With increased voltage the tube will glow at varying distances away from the wire, depending on the voltage.

Model A, with 3-Foot Handle for Circuits 2000 to 35000 Volts.....each .....

Model B, Same as Model A except with 6-Foot Added Extension to 3-Foot Handle for Circuits from 45000 to 230000 Volts.....each .....

SWITCHBOARDS

FOR GENERAL POWER AND LIGHTING SERVICE



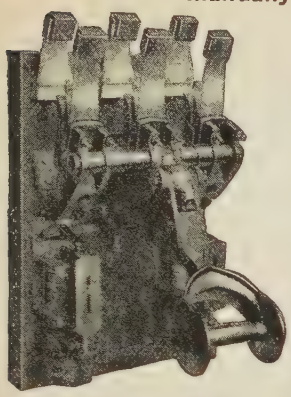
2300-VOLT 3-PHASE GENERATING STATION SWITCHBOARD

Whenever you are interested in the purchase of any type of switchboard, either for light or power, or both, let us submit figures on our product.

We feel that this catalogue will be in the hands of persons familiar with the electrical line generally and therefore that you are competent to make up a layout of practically any board you may wish a figure on.

With this in mind, we are soliciting your inquiries, asking that you give us detailed information when you submit your drawing.

G-E Type CP-108 Trip-Free Air Circuit Breakers
Manually-Operated



Triple-Pole, 250-Volt, 400-Amp. A.C. Breaker with 2 Over-Current Inverse-Time Devices

Particularly applicable to installations where reliable circuit protection and service with minimum maintenance are of importance.

A complete line of breakers up to and including 1600 amperes and 650 volts a.c. or d.c. These breakers have high interrupting ratings, are simple, compact and sturdy in construction, attractive in appearance, and all parts are fully accessible.

Accessories, including undervoltage device, shunt trip, and auxiliary switch, can be attached to breaker without affecting its calibration or interfering with normal operation.

		Single-Pole 1 Coil		Double-Pole 1 Coil		Double-Pole 2 Coils		Triple-Pole 2 Coils	
Amps.	Calibration	Ship. Wt. Lbs.	Net Each	Ship. Wt. Lbs.	Net Each	Ship. Wt. Lbs.	Net Each	Ship. Wt. Lbs.	Net Each
15	15– 30	100	$135	165	$184	175	$253	200	$290
30	30– 60	100	135	165	184	175	253	200	290
60	60– 120	100	135	165	184	175	253	200	290
100	100– 200	100	135	165	184	175	253	200	290
200	200– 400	100	135	165	184	175	253	200	290
400	400– 600	100	137	165	186	175	255	200	294
600	600–1200	125	145	210	202	225	271	260	325
800	800–1600	130	157	215	227	235	296	270	362
1200	1200–2400	120	184	200	282	215	351	250	444
1600	1600–3200	130	264	210	434	225	510	260	660

		Triple-Pole 3 Coils		4-Pole 2 Coils		4-Pole 3 Coils		4-Pole 4 Coils	
Amps.	Calibration	Ship. Wt. Lbs.	Net Each	Ship. Wt. Lbs.	Net Each	Ship. Wt. Lbs.	Net Each	Ship. Wt. Lbs.	Net Each
15	15– 30	210	$359	265	$349	275	$418	285	$487
30	30– 60	210	359	265	349	275	418	285	487
60	60– 120	210	359	265	349	275	418	285	487
100	100– 200	210	359	265	349	275	418	285	487
200	200– 400	210	359	265	349	275	418	285	487
400	400– 800	210	363	265	355	275	424	285	493
600	600–1200	275	394	340	387	368	456	375	525
800	800–1600	290	431	360	436	375	505	395	574
1200	1200–2400	265	513	335	545	345	615	355	684
1600	1600–3200	275	735	345	845	355	920	365	1000

The above prices include time delay breakers mounted on a permanent base of the size given in dimension table.

Breakers listed above are rated 650 volts a.c. or d.c., in single and double-pole units, and 250 volts a.c. or d.c., in triple or 4-pole units. For 251 to 650 volts a.c. or d.c., see additions below.

Permanent Base Dimensions

Description	Amperes	Height Inches	Width Inches	Thickness Inches
Single-Pole	15–800	24	8	1½
Double and Triple-Pole	15–800	24	16	1½
Double and Triple-Pole	1200	24	20	1½
Double and Triple-Pole	1600	24	20	1½
4-Pole	15–400	24	24	1½
4-Pole	600–1600	24	28	1½

Additions

For triple or 4-pole breakers at 251 to 650 volts a.c. or d.c., add barriers at $6.90 per breaker.

If bases larger than standard shown in dimension table are required add for extra ebony asbestos compound only $2.00 per square foot for 1½ or 2 inches thick and $2.60 per square foot for 2½ inches thick.

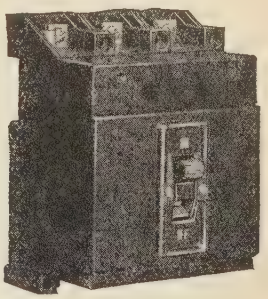
For dead-front operation of double or triple-pole breakers, add for steel cover plate, position indicator, extended handle, trip button and barriers, 15-1600 amperes, $76.00.

Deductions

To make breakers instantaneous trip omit time delay device at $33.00 per coil for 15-1200 amperes and $40.00 per coil for 1600 amperes. To make breakers non-automatic omit overload trip at $69.00 per coil for 15-1200 amperes and $76.00 per coil for 1600 amperes.

G-E Type AF-1 Air Circuit Breakers

Single-Pole



Triple-Pole

The Type AF-1 breakers are for switchboard or panelboard service in the following ratings: 125 volts a.c. or d.c., 15-50 amperes; 250 volts a.c. or 250/125 volts d.c., 15-50 amperes; 250 volts a.c. or d.c., 51-100 amperes; 600 volts a.c. or 250 volts d.c., 100-225 amperes; 600 volts a.c. or 250 volts d.c., 226-400 amperes; 600 volts a.c. or 250 volts d.c., 401-600 amperes. Breakers of the 50-ampere frame capacity have an interrupting rating of 5000 amperes. All breakers above the 50-ampere frame capacity have an interrupting rating of 10000 amperes.

They are made single, double and triple pole for the 50-ampere frame size and double and triple pole for all other sizes. The breakers are quick-make, quick-break and trip-free. Breakers having an interrupting rating of 5000 amperes are equipped with time delay thermal trips only. Breakers having an interrupting rating of 10000 amperes are equipped with both instantaneous magnetic trip (for short circuits) and thermal time delay trip (for overload).

Silver alloy, self-aligning, non-welding pressure contacts, which produce a firm positive contact operating at low temperature, are standard on these breakers.

Front Connected Only
For Lighting and Power Distribution Panelboards
Load Center and Meter Service
50-Ampere Frame

	125 Volts A.C.-D.C. Sgl.-Pole		230 Volts A.C. 125/250 Volts D.C. Dbl.-Pole		230 Volts A.C. 125/250 Volts D.C. Triple-Pole		600 Volts A.C. 250 Volts D.C. Dbl.-Pole		600 Volts A.C. 250 Volts D.C. Triple-Pole	
Amps.	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each
15–25	1.5	$4.75	3	$10.00	4	$16.00	On application			
35–50	1.5	5.40	3	10.75	4	17.00	On application			

100-Ampere Frame

	230 Volts A.C. 125/250 Volts D.C. Double-Pole		230 Volts A.C. 125/250 Volts D.C. Triple-Pole		600 Volts A.C. 250 Volts D.C. Double-Pole		600 Volts A.C. 250 Volts D.C. Triple-Pole	
Amps.	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each
50	12	$32.00	15	$42.00	15	On application		
70	12	33.00	15	44.00	15	On application		
90	12	35.00	15	46.00	15	On application		
100	12	36.00	15	48.00	15	On application		

225-Ampere Frame

50-100	35	$81.00	40	$101.00	35	$95.00	40	$123.00
125	35	83.00	40	104.00	35	97.00	40	125.00
150	35	85.00	40	106.00	35	99.00	40	127.00
175	35	86.00	40	108.00	35	101.00	40	130.00
200	35	88.00	40	111.00	35	102.00	40	132.00
225	35	90.00	40	113.00	35	104.00	40	135.00

600-Ampere Frame

225	50	$221.00	60	$262.00	50	$237.00	60	$286.00
250	50	231.00	60	274.00	50	247.00	60	298.00
325	50	240.00	60	286.00	50	257.00	60	309.00
400	50	250.00	60	298.00	50	266.00	60	321.00
450	50	259.00	60	310.00	50	276.00	60	333.00
500	50	269.00	60	321.00	50	285.00	60	345.00
550	50	278.00	60	333.00	50	295.00	60	357.00
600	50	288.00	60	345.00	50	304.00	60	369.00

The above breakers can be made back connected for switchboard application by adding studs as follows:

Amperes	50	100	225	400	600
Studs, each	$.35	.50	1.20	4.50	5.35

Price covers one stud only and must be multiplied by number required for each breaker.

G-E Type FK-33 Oil Circuit Breakers

*5000 Volts

These breakers are of the single-tank type, i.e., all poles in one tank, of cast and punched steel construction and operated by the universal Type HA-2 lever.

Furnished for manual and solenoid operation.

Breakers are furnished with stud and cable terminals. For bar connections, the cable terminals are omitted and connection bars are bolted to the stud terminals.

Cable terminals have cable holes as follows: 200 amperes, .625 inch in diameter; 400 amperes, .881 inch in diameter.

Illustration shows front view of Type P-5 self-supporting steel panel for isolated installations with Type FK-33 oil circuit breaker assembled for shipment.

Manually Operated, Non-Automatic

Operated by the Type HA-2 lever. This lever is equipped with provisions for a 1, 2 or 3-coil trip mechanism. Change-overs from non-automatic to automatic features can be made with a minimum amount of labor and cost. Automatic attachments with calibrating tubes are easily installed in the field. A complete line of transformer, relay, reactor and d.c. trip coils is available. Manually operated breakers have provision for mounting auxiliary switches. Breakers operated remotely may be equipped with magnetic locks.

Panel Mounting—Breaker for Mounting Directly on Back of 1 or 1½-Inch Panel

Throw	Amps.	Double-Pole Cat. No.	Net Each	Triple-Pole Cat. No.	Net Each	4-Pole Cat. No.	Net Each
Sgl.	200	6003653G 1	$64	6003653G 2	$74	6003653G 3	$96
Sgl.	400	6003653G 7	74	6003653G 8	87	6003653G 9	113
Dbl.	200	6003653G 4	128	6003653G 5	148	6003653G 6	192
Dbl.	400	6003653G10	148	6003653G11	174	6003653G12	226

Panel Mounting—Breaker for Mounting Directly on Back of 2-Inch Panel

Sgl.	200	6003654G 1	$64	6003654G 2	$74	6003654G 3	$96
Sgl.	400	6003654G 7	74	6003654G 8	87	6003654G 9	113
Dbl.	200	6003654G 4	128	6003654G 5	148	6003654G 6	192
Dbl.	400	6003654G10	148	6003654G11	174	6003654G12	226

Panel-Frame Mounting—Breaker for Mounting 5-Inch Back of Panel

Sgl.	200	6003655G 1	$70	6003655G 2	$80	6003655G 3	$102
Sgl.	400	6003655G 7	80	6003655G 8	93	6003655G 9	119
Dbl.	200	6003655G 4	140	6003655G 5	160	6003655G 6	204
Dbl.	400	6003655G10	160	6003655G11	186	6003655G12	238

Remote, Pipe-Framework Mounting

Sgl.	200	6003656G 1	$89	6003656G 2	$99	6003656G 3	$121
Sgl.	400	6003656G 7	99	6003656G 8	112	6003656G 9	138
Dbl.	200	6003656G 4	178	6003656G 5	198	6003656G 6	242
Dbl.	400	6003656G10	198	6003656G11	224	6003656G12	276

Flat-Surface Mounting—Breaker for Mounting on Flat Surface or Wall

Sgl.	200	6003657G 1	$89	6003657G 2	$99	6003657G 3	$121
Sgl.	400	6003657G 7	99	6003657G 8	112	6003657G 9	138
Dbl.	200	6003657G 4	178	6003657G 5	198	6003657G 6	242
Dbl.	400	6003657G10	198	6003657G11	224	6003657G12	276

*The installation of apparatus on panel or switchboard is not recommended when that apparatus is subjected to pressure in excess of 2500 volts between phases for ungrounded systems or between lines and neutral for grounded systems. For such installations remote control apparatus is recommended.

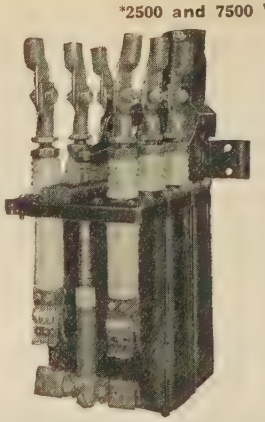
Solenoid-Operated, Non-Automatic—Single-Throw

Furnished for mounting breaker and solenoid back to back on pipe framework. Breakers are made automatic by the addition of suitable tripping transformers and circuit-closing overcurrent relays.

Prices and complete information on solenoid-operated breakers on application.

G-E Types FK-35 and FK-35Y2 Oil Circuit Breakers

*2500 and 7500 Volts, Single-Throw



Triple-Pole, Single-Throw, 7500-volt, 600-Ampere Breaker

Types FK-35 and FK-35Y2 breakers follow the standard unit design, i.e., each pole is integral with its own cover, tank, contacts and operating rod. Frame carries breaker mechanism and cross head. Double or triple-pole breakers are assembled on same frame, the former omitting the middle pole. Four-pole have a longer frame and cross head.

Furnished with stud and cable terminals. For bar connection cable terminals are omitted and connection bars bolted to stud terminal. Cable terminals have cable hole as follows: 600 amperes, 1.209 inch diameter; 800 amperes, 1.461 inch diameter.

Features

Breakers adapted to either vertical or horizontal operation by making one member of breaker mechanism a bell crank.

Interchangeability of breaker units of like rating.

Each phase in separate tank.

Heavy oval tanks suspended by hook bolts.

Flared wedge contacts under heavy pressure.

Arcing tips on FK-35Y2.

Breaker opens by gravity accelerated by compression springs on operating rods with buffers to absorb shock.

Full complement of stud and cable terminals.

Bell alarm auxiliary switch with all operating levers.

Manually Operated, Non-Automatic

With HA-2 operating lever. Non-automatic breakers listed can be made automatic by the addition of suitable current transformers and automatic trip attachments.

For Mounting Directly on Back of Panel

Type	Amps.	Volts	Double-Pole †Cat. No.	Net Each	Triple-Pole †Cat. No.	Net Each	4-Pole †Cat. No.	Net Each
FK-35	600	7500	1945973G13	$116	1945973G14	$136	1945973G15	$177
	800	2500	1945973G 7	147	1945973G 8	173	1945973G 9	225
FK-35Y2	600	7500	1945977G16	130	1945977G17	153	1945977G18	199

For Mounting on Panel Frame, 5 Inches Back of Panel

FK-35	600	7500	1945972G13	$122	1945972G14	$142	1945972G15	$183
	800	2500	1945972G 7	153	1945972G 8	179	1945972G 9	231
FK-35Y2	600	7500	1945976G16	136	1945976G17	159	1945976G18	205

For Mounting Remote From Panel—For Mounting on Pipe Framework

FK-35	600	7500	1945975G13	$141	1945975G14	$161	1945975G15	$202
	800	2500	1945975G 7	172	1945975G 8	198	1945975G 9	250
FK-35Y2	600	7500	1945988G16	155	1945988G17	178	1945988G18	224

For Mounting on Flat Surface

FK-35	600	7500	1945974G 4	$141	1945974G 5	$161	1945974G 6	$202
FK-35Y2	600	7500	1945987G13	155	1945987G14	178	1945987G15	224

For Mounting in Masonry Cell (Cell Material Not Included)

FK-35	600	7500	1945974G10	$141	1945974G11	$161	1945974G12	$202
FK-35Y2	600	7500	1945987G16	155	1945987G17	178	1945987G18	224

*Installation of apparatus on panel or switchboard is not recommended when apparatus is subjected to pressure in excess of 2500 volts between phases for ungrounded system or between lines and neutral for grounded systems. For such installations, remote control apparatus is recommended.

†Breaker frame support included.

Double-Throw

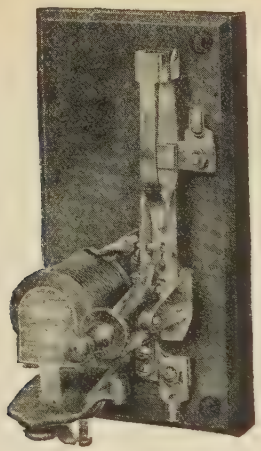
Double-throw FK-35 and FK-35Y2 breakers consist of two single-throw breakers, mechanical interlock and cross-trip for two operating levers. Order two breakers by Cat. No. and specify that they are to be operated as a double-throw equipment. Specify desired distance between operating levers 8, 9, 10, 11, 12 or 13 inches for remote operation and 15¼ inches minimum for direct on panel or 5 inches back of panel. Price the complete double-throw breakers at exactly twice the price per Cat. No. selected from above table.

Solenoid-Operated, Non-Automatic

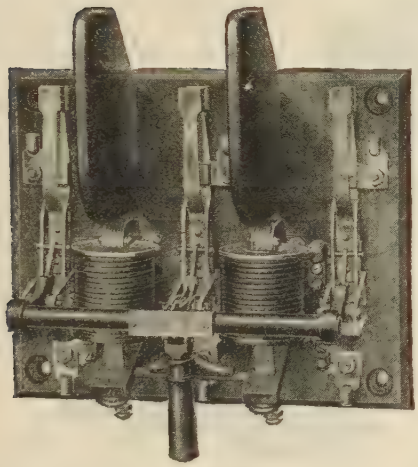
Breakers are made automatic by the addition of suitable current transformers and circuit-closing relays.

Prices and complete information on application.

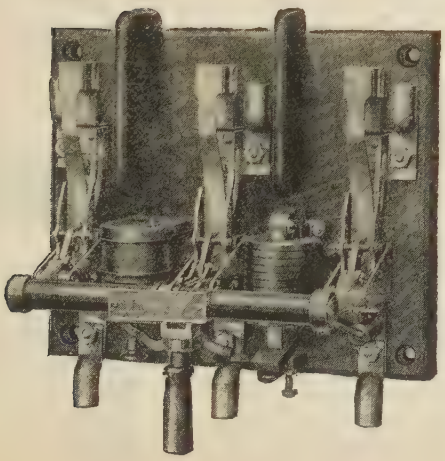
G-E Type CG Air Circuit Breakers



D. C., Overload
Single-Pole, 550 Volts or Less



A. C., Overload
Triple-Pole, 600 Volts, 2 Overload Coils



A. C., Overload and Undervoltage
Triple-Pole, 600 Volts

G-E Type CG Air Circuit Breakers

D.C.—Overcurrent

Single-Pole, 550 Volts or Less

Amps.	Front Connected on Base: Cat. No.	Ship. Wt. Lbs.	Net Each	Back Connected for 1½ or 2-In. Panel: Cat. No.	Ship. Wt. Lbs.	Net Each
3	2802301G1	20	$18	2802300G1	12	$18
5	2802301G2	20	18	2802300G2	12	18
10	2802301G3	20	18	2802300G3	12	18
15	2802301G4	20	18	2802300G4	12	18
25	2802301G5	20	21	2802300G5	12	21
50	2802301G6	20	21	2802300G6	12	21
100	2802301G7	20	21	2802300G7	12	21
200	2802303G1	32	29	2802302G1	20	29
300	2802303G2	32	31	2802302G2	20	31
	Double-Pole (One Overcurrent Coil) 550 Volts or Less					
3	2802305G1	30	$26	2802304G1	15	$26
5	2802305G2	30	26	2802304G2	15	26
10	2802305G3	30	26	2802304G3	15	26
15	2802305G4	30	26	2802304G4	15	26
25	2802305G5	30	30	2802304G5	15	30
50	2802305G6	30	30	2802304G6	15	30
100	2802305G7	30	30	2802304G7	15	30
200	2802307G1	50	44	2802306G1	35	44
300	2802307G2	50	49	2802306G2	35	49

Calibration from 75 to 150 per cent of normal capacity.

D.C.—*Plain Shunt Trip

Shunt trip coils are intended for momentary operation only and must not be left in circuit continuously after being energized. Connections should be so arranged that the opening of the circuit breaker will disconnect the shunt trip circuit. If for any reason, however, the shunt trip has to be connected to the line side, a circuit-opening auxiliary switch should be mounted on the breaker to open the trip circuit.

Single-Pole, 550 Volts or Less

Amps.	Front Connected on Base: Cat. No.	Ship. Wt. Lbs.	Net Each	Back Connected for 1½ or 2-In. Panel: Cat. No.	Ship. Wt. Lbs.	Net Each
100	2802329G1	20	$21	2802328G1	12	$21
200	2802331G1	32	29	2802330G1	20	29
300	2802331G2	32	31	2802330G2	20	31
	Double-Pole (Trip Both Poles Same as Overcurrent), 550 Volts or Less					
100	2802333G1	25	$29	2802332G1	15	$29
200	2802335G1	48	44	2802334G1	32	44
300	2802335G2	48	49	2802334G2	32	49

*The coil used with the shunt type breaker will operate on any d.c. voltage of 550 volts or less.

These breakers have no overcurrent coils. The shunt coil on these breakers replaces the overcurrent coil, and is not an attachment as in the case of overcurrent and shunt trip.

D.C.—Undercurrent

Undercurrent breakers are calibrated in the factory to trip on 20 per cent of the carrying capacity. They can be set to trip at any point as low as 10 per cent if so specified on requisition.

Single-Pole, 550 Volts or Less

Amps.	Front Connected on Base: Cat. No.	Ship. Wt. Lbs	Net Each	Back Connected for 1½ or 2-In. Panel: Cat. No.	Ship. Wt. Lbs.	Net Each
15	2802309G4	20	$21	2802308G4	12	$21
25	2802309G5	20	22	2802308G5	12	22
50	2802309G6	20	22	2802308G6	12	22
100	2802309G7	20	22	2802308G7	12	22
200	2802311G1	32	31	2802310G1	20	31
300	2802311G2	32	33	2802310G2	20	33
	Double-Pole (One Overcurrent Coil) 550 Volts or Less					
15	2802313G4	30	$30	2802312G4	15	$30
25	2802313G5	30	33	2802312G5	15	33
50	2802313G6	30	33	2802312G6	15	33
100	2802313G7	30	33	2802312G7	15	33
200	2802315G1	50	47	2802314G1	35	47
300	2802315G2	50	52	2802314G2	35	52

G-E Type CG Air Circuit Breakers

A.C.—Overcurrent

Front Connected on Base, 600 Volts or Less

Amps.	Single-Pole Cat. No.	Ship. Wt. Lbs.	Net Each	Double-Pole (One Overcurrent Coil) Cat. No.	Ship. Wt. Lbs.	Net Each	*Triple-Pole (Two Overcurrent Coils) Cat. No.	Ship. Wt. Lbs.	Net Each
3	280234561	20	$21	280234961	30	$32	280236961	44	$57
5	280234562	20	21	280234962	30	32	280236962	44	57
10	280234563	20	21	280234963	30	32	280236963	44	57
15	280234564	20	21	280234964	30	32	280336964	44	57
25	280234565	20	25	280234965	30	35	280236965	44	65
50	280234566	20	25	280234966	30	35	280236966	44	65
100	280234567	20	25	280234967	30	35	280236967	44	65
200	280234761	32	35	280235161	50	52	280237161	70	90
300	280234762	32	37	280235162	50	58	280237162	70	100
	Back Connected for 1½ or 2-Inch Panel 600 Volts or Less								
3	280234461	12	$21	280234861	15	$32	280236861	40	$57
5	280234462	12	21	280234862	15	32	280236862	40	57
10	280234463	12	21	280234863	15	32	280236863	40	57
15	280234464	12	21	280234864	15	32	280236864	40	57
25	280234465	12	25	280234865	15	35	280236865	40	65
50	280234466	12	25	280234866	15	35	280236866	40	65
100	280234467	12	25	280234867	15	35	280236867	40	65
200	280234661	20	35	280235061	35	52	280237061	55	90
300	280234662	20	37	280235062	35	58	280237062	55	100

*This breaker does not take standard undervoltage attachment.

Calibration is from 75 to 150 per cent of normal capacity.

A.C.—Overcurrent and Undervoltage

Triple-Pole, One Overcurrent and One Undercurrent Coil—600 Volts or Less—25, 40 and 60 Cycles

Amps.	Front Connected on Base Cat. No.	Ship. Wt. Lbs.	Net Each	Back Connected for 1½ or 2-In. Panels Cat. No.	Ship. Wt. Lbs.	Net Each
3	2841444G40	47	$60	2841444G4	44	$60
5	2841444G44	47	60	2841444G8	44	60
10	2841444G48	47	60	2841444G12	44	60
15	2841444G52	47	60	2841444G16	44	60
25	2841444G56	47	67	2841444G20	44	67
50	2841444G60	47	67	2841444G24	44	67
100	2841444G64	47	67	2841444G28	44	67
200	2841444G68	70	91	2841444G32	55	91
300	2841444G70	70	107	2841444G36	55	107

Calibration is from 75 to 150 per cent of normal capacity.

A.C.—‡Plain Shunt Trip

Shunt trip coils are intended for momentary operation only and must not be left in circuit continuously after being energized. Connections should be so arranged that opening of circuit breaker will disconnect shunt trip circuit. If for any reason, however, shunt trip has to be connected to the line side a circuit-opening auxiliary switch should be mounted on breakers to open trip circuit.

Front Connected on Base—600 Volts or Less

Amps.	Single-Pole Cat. No.	Ship. Wt. Lbs.	Net Each	Double-Pole (Trip All Poles Same as Overcurrent) Cat. No.	Ship. Wt. Lbs.	Net Each	Triple-Pole (Trip All Poles Same as Overcurrent) Cat. No.	Ship. Wt. Lbs.	Net Each
100	280235361	20	$24	280235761	25	$33	280238161	40	$44
200	280235561	32	32	280235961	48	42	280238361	65	72
300	280235562	32	34	280235962	48	46	280238362	65	79
	Back Connected for 1½ or 2-Inch Panel 600 Volts or Less								
100	280235261	12	$24	280235661	15	$33	280238061	30	$44
200	280235461	20	32	280235861	32	42	280238261	50	72
300	280235462	20	34	280235862	32	46	280238262	50	79

‡Coil used with shunt trip breaker will operate on any a.c. voltage, 600 volts or less.

Capacities below 100 ampere, same price.

These breakers have no overcurrent coils. Shunt coil on these breakers replaces the overcurrent coil, and is not an attachment as in the case of overcurrent and shunt trip.

G-E Undervoltage Attachments

For Type CG Air Circuit Breakers

For Use with Single and Double-Pole Breakers 125, 250 and 550 Volts A.C. or D.C.

By the use of undervoltage release attachment, circuit breakers may be arranged to operate on a drop in or cessation of voltage, two or more circuit breakers may be electrically interlocked and by use of a switch to short-circuit undervoltage release, circuit breakers may be tripped from one or more remote points.

Releases at approximately one-half rated voltage.

Voltage of Circuit	Approx. Releasing Voltage	*For Use with 3 to 100-Amp. Breakers Cat. No.	Ship. Wt. Lbs.	Net Each	*For Use with 200 and 300-Amp. Breakers Cat. No.	Ship. Wt. Lbs.	Net Each
125	60	6001362G1	4	$8	6001362G4	4	$8
250	125	6001362G2	6	9	6001362G5	6	9
550	250	6001362G3	6	11	6001362G6	6	11

*For use with single and double-pole breakers only. Information covering undervoltage attachment for use with triple-pole breakers on application.

G-E Shunt Trip Attachments

For Type CG Air Circuit Breakers

For Use with Single and Double-Pole Breakers, 125, 250 and 550 Volts D.C.—110, 220 and 440 Volts A.C.

This attachment should be allowed to remain in circuit only momentarily.

Same attachment is used with either single or double-pole breakers. Only one pole (the right-hand from front) is tripped out by these attachments.

Cat. No. **2801345G3**, For Use with 3 to 100-Ampere Circuit Breakers, Shipping Weight 4 Pounds..each **$5.00**
Cat. No. **2801345G4**, For Use with 200 and 300-Ampere Circuit Breakers, Shipping Weight 4 Pounds...each **5.00**

G-E Auxiliary Switches

For Type CG Air Circuit Breakers

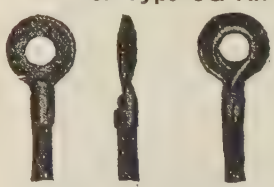
Combined Circuit-Opening and Circuit-Closing

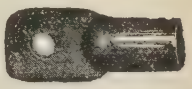
For A.C. or D.C.

For Mounting On	For Use with 3 to 100-Amp. Breakers Cat. No.	Ship. Wt. Lbs.	Net Each	For Use with 200 and 300-Amp. Breakers Cat. No.	Ship. Wt. Lbs.	Net Each
1¼-Inch Base....	37559	2	$4.60	37562	2	$4.60
1½-Inch Panel...	37560	2	4.60	37563	2	4.60
2-Inch Panel.....	37561	2	4.60	37564	2	4.60

G-E Copper Cable Terminals

For Type CG Air Circuit Breakers





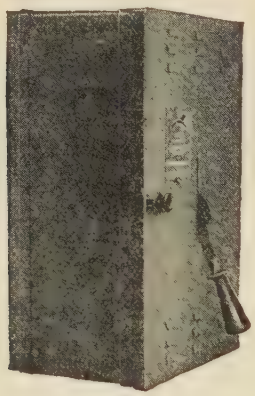
Amps.	3 to 25-Amp. Terminals For Front-Connected Breakers Diam. Cable Hole In.	Cat. No.	Diam. Stud Hole In.	Wt. Lbs.	Net Each	25 to 300-Amp. Terminals For Back-Connected Breakers Cat. No.	Diam. Stud Hole In.	Wt. Lbs.	Net Each
3–25	....	*174431	17/64	2	$.02	103765	13/32	3	$.12
50	.265	41073	17/64	3	.12	103765	13/32	3	.12
100	.419	1453744	9/32	4½	.08	1444461	13/32	4½	.07
200	.586	1454829	13/32	9	.20	1444465	17/32	9	.15
300	.776	411695	13/32	30	.25	1444471	21/32	30	.35

*Cup washer.

G-E Type AB-2 Air Circuit Breakers

Trip-Free—Enclosed for Individual Mounting

600 Volts A.C. or 250 Volts D.C.



A back-connected trip-free air circuit breaker mounted on an insulating base. Can be manually or electrically operated and is double or triple pole.

Available in the following arrangements: Open construction—on front of panel; metal-enclosed; metal-enclosed with pull box. Mounted in dead-front or metal-enclosed switchboards.

Breaker has high interrupting rating—12000 amperes for all voltages. It is rated at 250 volts d.c. and 600 volts a.c., 15 to 600 amperes.

The above illustration shows a 3-pole breaker having 3 overcurrent trips in steel cabinet with pull box for wall mounting, disconnecting contacts for studs and shunt-trip connections.

Amperes	Double-Pole 2 Coils Net Each	Triple-Pole 2 Coils Net Each	Triple-Pole 3 Coils Net Each
15	$70.00	$77.00	$83.00
20	70.00	77.00	83.00
30	70.00	77.00	83.00
45	70.00	77.00	83.00
60	70.00	77.00	83.00
80	70.00	77.00	83.00
100	70.00	77.00	83.00
150	94.00	127.00	133.00
200	101.00	134.00	140.00
300	132.00	164.00	170.00
400	160.00	195.00	201.00
600	224.00	257.00	263.00

Shipping weight approximately 100 pounds each.

Information on breakers not listed and on 4-pole breakers furnished on application.

Additions

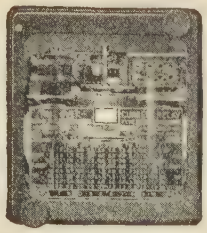
Shunt Trip Device	each	$8.30
Undervoltage Device	each	8.30
Push Button Auxiliary Switch	each	5.50
A.C. or D.C. Motor Operating Mechanism	each	111.00

Deductions

Time Delay and Magnetic Trip for Making Breaker Non-Automatic	per coil	6.00

G-E Induction Time Relays

For A.C. Circuits



Type IAC Single-Unit Current Relay

Type IAV Single-Unit Voltage Relay

For protection of a.c. circuits and apparatus. These relays are particularly applicable where either consistency or selectivity in time of operation is desired.

Rectangular case is 5½ inches wide; permits mounting of 4 relays side by side in space 24 inches wide.

The stationary contact members are individually adjustable.

Target indicator is clearly visible on Type IAC when relay has operated. Disc on Type IAC is reset by weight, producing constant return force.

Type IAC relays can be furnished for time overcurrent tripping at current settings and instantaneous overcurrent tripping at higher current settings by adding instantaneous attachments.

Standard Ratings

Type IAC Overcurrent or Undercurrent Relays

Current taps: 4 to 15, 4 to 16, 1.5 to 6 and .5 to 2.5 amperes.

Taps: 4-15 amperes—taps at 4, 5, 6, 8, 10, 12 and 15 amperes; 4-16 amperes—taps at 4, 5, 6, 8, 10, 12 and 16 amperes; 1.5-6 amperes—taps at 1.5, 2.0, 2.5, 3.0, 4.0, 5.0 and 6.0 amperes; 0.5-2.5 amperes—taps at 0.5, 0.6, 0.8, 1.0, 1.5, 2.0 and 2.5 amperes.

Frequency: 25, 50 and 60 cycles.

Target ratings: 1 and 0.2 ampere.

Type IAV Overvoltage and Undervoltage Relays

Voltage: 115, 230, 460 and 575 volts.

Frequency: 25, 50 and 60 cycles.

Features

Type IAC

Units: Single or 3.

Contacts: 2-contact, single-circuit closing; 3-contact, double-circuit closing; double-throw, single-circuit closing each way.

Attachments: Current indicator, instantaneous element, and auxiliary trip.

Type IAV

Contacts: 2-contact, single-circuit closing; 3-contact, double-circuit closing; double-throw, 1-circuit closing each way.

Attachments: Instantaneous element.

The standard undervoltage adjustment of Type IAV relays is 70% of rated voltage to close the contacts. This may be adjusted to any value between 50% and 95% of rated voltage by turning adjusting screw on front of relay.

The burden of the 115-volt, 60-cycle coil is 13 volt-amperes and of the 115-volt 25-cycle coil, 7.5 volt-amperes at rated voltage. All coils are suitable for continuous operation at rated voltage.

Time Overcurrent

Type	Each	Service	Function	Circuits	Ship. Wt. Lbs.
IAC	$41.00	Sgl.-Ph.	Cir.-Closing	1-Circuit	19
IAC	179.00	3-Ph.	Cir.-Closing	Three 1-Cir.	55
Instantaneous and Time					
IAC	$53.00	Sgl.-Ph.	Cir.-Closing	1-Circuit	19
IAC	215.00	3-Ph.	Cir.-Closing	Three 1-Cir.	60
Undervoltage					
IAV	$53.00	Sgl.-Ph.	Cir.-Closing	1-Circuit	19
IAV	57.00	Sgl.-Ph.	Cir.-Closing	2-Circuit	19
Overvoltage					
IAV	$53.00	Sgl.-Ph.	Cir.-Closing	1-Circuit	19

The above are typical listings with 1 ampere 0.25 ohm, or 0.2 ampere 7 ohms target coil; specify which target coil or the device with which relay is to be used when ordering.

G-E Plunger Type Relays

For Mounting on Panels

A.C., Single-Pole

Time Relay

Instantaneous Relay

The plunger type includes a complete line of relays to protect against overcurrent and undervoltage, and for use as auxiliary relays. The same principle of operation is common to all of them and depends upon the action of a magnet coil in attracting or releasing the plunger when predetermined values of voltage or current are present in the coil circuit.

The mechanical design is unique, as all relays are single-pole, made of interchangeable parts, and the contacts can be arranged for circuit opening or circuit closing. This design, with its variety of adjustments, large variety of coils, and arrangement of contacts, makes it possible to adapt these relays to an unusually large number of applications.

For convenience of selection the following typical varieties are listed:

Type	Each	Circuits	Operation	Function	Normal Position	Ship. Wt. Lbs.
			Overcurrent			
PAC*	$28.00	2	Instantaneous	1—Closing	Open	6
PAC*	32.00	2	Time	1—Opening	Closed	6
			A.C. Undervoltage			
PCV	$36.00	2	Instantaneous	1—Closing	Open	6
PCV	40.00	2	Time	1—Opening	Closed	6
			Auxiliary Voltage			
PAA*	$30.00	2	Instantaneous	1—Closing	Open	6
PAA*	34.00	2	Time	1—Opening	Closed	6
			Overcurrent			
PQ	$22.00	1	Instantaneous	Closing	Open	10
PQ	26.00	1	Time	Closing	Open	12

*These relays are self-reset and are also available with either electrical or hand-reset features.

In ordering specify by description and for time relay state whether inverse time or definite time is desired. Current transformers are not included.

Principal Features

Covers are made of a molded compound.

Removable studs are provided for back connection.

Only one valve is provided for time relays. This valve serves a dual purpose and can readily be adjusted to make the time interval effective on either the up or down stroke of the plunger, or both in the PAC and PAA types.

Contacts are of the universal design and can be readily changed from circuit-opening to circuit-closing or vice versa.

Toggle can be changed from self-reset to hand-reset or vice versa, by a simple means provided for this purpose.

The movable contact bar is held securely but not permanently, thereby easily permitting change from parallel to separate circuits or vice versa, by replacing contact bar.

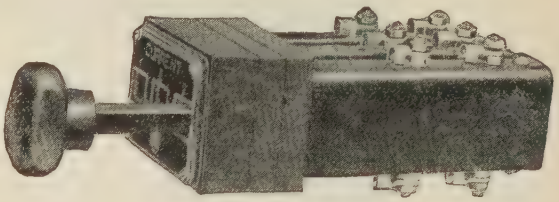
Material of bellows is not affected by seasonable changes in temperature.

All relays are provided with an orange-colored mechanical target indicator, hand-reset by means of a push button in cover.

G-E Type PJ-4 (Standard Unit) Current and Potential Transfer Jacks and Plugs

For Mounting on 5/32, 1, 1½ or 2-Inch Panels

10 Amperes, 600 Volts



Cat. No. 3663608G2 Jack with Plug Cat. No. 2874991G1 Inserted Part Way

The Type PJ-4 line includes jacks and plugs other than those for connecting an ammeter to any phase of a 2 or 3-phase circuit for use with current transformers having a 5-ampere secondary.

Cat. No.	Each	Unit Assembly	Description and Use	Ship. Wt. Lbs.
			Jack	
†3663608G 1	$4.00	Sgl.	Current Transfer S.P. Unit..	2
†3663608G 2	10.00	Tpl.	Current Trans. 3 S.P. Units.	5
3663608G16	4.50	Sgl.	Potential Transfer 3-Ph. 3-W. Circuit D.P., S.-T. Unit..	2
3663608G17	12.00	Tpl.	Potential Transfer 3-Ph. 3-W. Cir. 3 D.P., S.-T, Units...	5
‡3663608G 7	6.00	Sgl.	Potential Transfer T.P., S.-T. Unit.....	2
‡3663608G 8	14.00	Tpl.	Potential Transfer 3 T.P., S.-T. Units.....	5
§3663608G11	5.00	Sgl.	Current and Potential Transfer 3-Ph., 4-Wire Circuit..	2
3663608G12	13.00	Tpl.	Current and Potential Trans. 3-Ph., 4-W. Cir. 3 S.P. Units.....	5
‡3663608G13	6.50	Sgl.	Cur. and Pot. Trans. 3-Ph., 3-W. Circuit Single Unit..	2
‡3663608G14	17.00	Tpl.	Cur. and Pot. Trans. 3-Ph., 3-W. Circuit 3 Units.....	5
‡3663608G15	7.00	Sgl.	Potential Transfer 4-P., S.-T. Unit.....	2
			Isolating Switch and Plug	
*3663608G 6	$13.00	Sgl.	Potential Trans. D.P., S.-T. Unit with Non-Removable Plug.....	2
*3663608G10	15.00	Sgl.	Potential Trans. T.P., S.-T. Unit with Non-Removable Plug.....	2
			Plug	
2874991G 1	$2.00	Sgl.	For Cat. No. 3663608G1 or Cat. No. 3663608G2.....	1
§2874991G 2	4.00	Sgl.	For Cat. No. 3663608G11 or Cat. No. 3663608G12.....	1
6011756G 1	4.00	Sgl.	For Cat. No. 3663608G16 or Cat. No. 3663608G17.....	1
2874991G 4	6.50	Sgl.	For Cat. No. 3663608G13 or Cat. No. 3663608G14.....	1
3874991G 5	6.50	Sgl.	For Cat. No. 3663608G7 or Cat. No. 3663608G8.....	1
2874991G 6	8.50	Sgl.	For Cat. No. 3663608G15...	1
2874992G 1	10.00	Sgl.	For Cat. No. 3663608G10....	1
2874992G 2	9.50	Sgl.	For Cat. No. 3663608G 6....	1

*Plugs not included in Cat. No. or prices of jacks except in Cat. Nos. 3663608G6 and 3663608G10.

†When old style plug Cat. No. 2649822G5 for 5/32-inch panel is used omit all spacers when mounting receptacle on panel.

‡Do not use on any board where a common instrument is connected to plug receptacle of same size opening.

§Formerly used also for temperature meter outfits. Complete information furnished on jacks and plugs for temperature meter equipment.

Plug holder—if desired, use Cat. No. 129965.

G-E Combined Receptacle and Resistor Indicating Lamps and Color Caps

Receptacle body and escutcheon are made of insulating compound which permits using the device on metal panels. The escutcheon, which mounts in panel hole from front and receptacle body which mounts from rear are threaded, making a compact unit when assembled.

Resilient metal contact clips hold lamp and provide rear connections.

A complete indicating lamp outfit with Cat. No. 59X243 G-E Mazda telephone type T2 bulb, No. 902 slide base, 24 volts, .032-.038 amperes, a resistor, except on 24 volt where none is required, a set of binding screws and a push-type compound color cap. Specify color of cap wanted in ordering.

Resistor element slides over receptacle body from rear and complete device has provision for soldered connections. Binding screws are included for use where soldered connections are not desired.

Device is for mounting on 1, 1½ or 2-inch panel. For mounting on ⅞-inch panel order one spacer Cat. No. 6009135-P1, 10 cents net extra. For mounting on 5/32-inch metal panel, order one spacer Cat. No. 6009135P2, 10 cents net extra. Panels more than 1 inch thick must be counterbored on the back with a diameter of 1¼ inches to a depth of 1 inch from the front of panel.

Receptacle and Resistor Indicating Lamps Complete with Color Caps Where Lamp is Operated at One Brilliancy

Cat. No.	Unit Each	Std. Pkg. 40 Units Each	Circuit Voltage †Rated	Min..	Max.	Series Resistor Ohms	Ship. Wt. Oz.
6005406G1	$2.30	$83.00	24	21	25	No Resistance Included	2
6005406G2	2.80	101.00	48	42	50	685	4
6005406G4	2.80	101.00	110	88	121	2500	4
6005406G5	2.80	101.00	125	115	130	2885	4
6005406G7	2.80	101.00	220	176	242	5600	4
6005406G8	2.80	101.00	250	230	260	6457	4

Receptacle and Resistor (Middle Tap) Indicating Lamps Complete with Clear Color Caps and Connection Giving *Dim-Bright Operation

6005406G3	$3.00	$108.00	48	42	50	1160 Total with 400 Tap	4
6005406G6	3.00	108.00	125	115	130	4120 Total with 2155 Tap	4
6005406G9	3.00	108.00	250	230	260	8929 Total with 4996 Tap	4

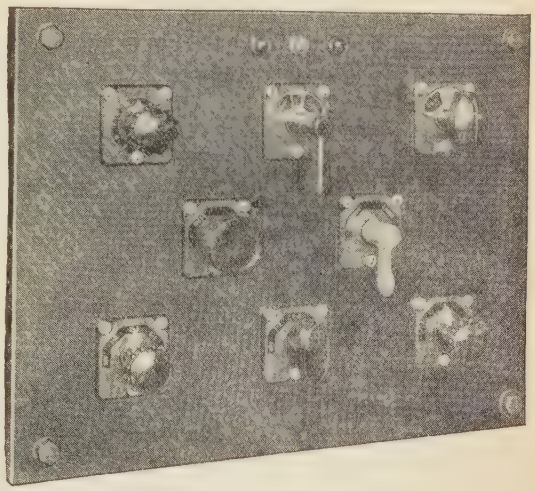
Spare Color Caps

Cat. No.	Unit Each	Std. Pkg. 40 Units Each	Color	Material No.	Ship. Wt. Oz.
6009134P1	$.30	$11.00	Clear	106	1
6009134P2	.30	11.00	Red	106	1
6009134P3	.30	11.00	Green	106	1
6009134P4	.30	11.00	Yellow	106	1

*This applies to the telltale system of connections as used with Type CL-1, special twin pull-button and Type SB-1 control switches.

†For rated voltages higher than listed, use Cat. No. 6005406G1 and a cage-type resistor mounted separate from receptacle.

G-E Type SB-1 Control and Instrument Switches



The Type SB-1 switches are multi-contact switches for the control of circuit breakers and electrically operated governors and rheostats, for the transfer of current and potential coils of instruments, and for many other similar applications.

The features of these switches are:

Positive quick-acting contacts.

Silver-to-silver contacts.

Barriers between adjacent contacts to prevent arcing.

All connections easily fastened with a screwdriver.

Ample room for connecting leads.

Escutcheon plates of black Textolite, permanent finish.

Switches are compact and require small panel space.

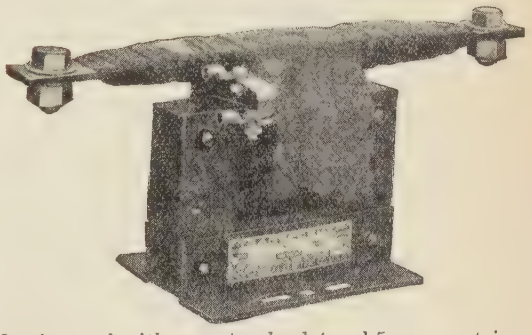
Mechanical target (red or green) shows last operation of the circuit-breaker control switch.

Distinctive handles of different styles.

G-E Type JY-285 Tripping Current Transformers

For Oil Circuit Breakers

25-125 Cycles, 5000 Volts or Less



May be used with any standard 4 and 5-ampere trip coils. In general its use is limited to tripping duty only, either directly or in connection with relays, but where high accuracy is not essential a secondary ammeter may also be used.

Tested at 15000 volts between primary and all other parts, and at 2500 volts between secondary and ground.

Primary terminals are not included.

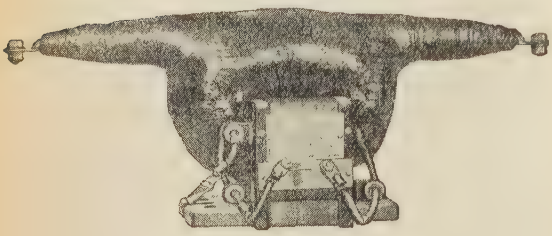
Shipping weights: 5 to 100 amperes, 16 pounds; 120 to 200 amperes, 18 pounds; 250 to 800 amperes, 20 pounds.

Cat. No.	Net Each	Prim. Amps.	Ratio	Cat. No.	Net Each	Prim. Amps.	Ratio
9JY285AAA	$12.00	5	1–1	9JY285AAR	$12.00	100	20–1
9JY285AAB	12.00	10	2–1	9JY285AAS	12.00	120	24–1
9JY285AAD	12.00	15	3–1	9JY285AAV	12.50	150	30–1
9JY285AAE	12.00	20	4–1	9JY285AAW	13.00	200	40–1
9JY285AAF	12.00	25	5–1	9JY285AAX	13.50	250	50–1
9JY285AAH	12.00	30	6–1	9JY285AAY	14.00	300	60–1
9JY285AAJ	12.00	40	8–1	9JY285AAZ	15.00	400	80–1
9JY285AAK	12.00	50	10–1	9JY285ABA	16.00	500	100–1
9JY285AAL	12.00	60	12–1	9JY285ABB	17.00	600	120–1
9JY285AAM	12.00	75	15–1	9JY285ABC	19.00	800	160–1

G-E Type Y-298A Tripping Current Transformers

For Oil Circuit Breakers

25-125 Cycles, 15000 Volts or Less

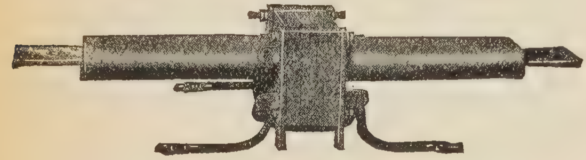


400 Amperes and Below

These transformers are for tripping oil circuit breakers. They may be used with any of the standard 4- and 5-ampere trip coils. They are listed in capacities from 5 to 800 amperes at 15000 volts or less.

In general their use is limited to tripping duty only, either directly or in connection with relays, but where high accuracy is not essential a secondary ammeter may be used.

As these transformers are small and inexpensive they may be used very conveniently in installations where series trip has heretofore been recommended.



500 to 800 Amperes

The smaller capacities from 5 to 400 amperes inclusive are equipped with cast metal bases with two-bolt holes, allowing them to be bolted to flat surfaces or pipe supports.

The larger capacities from 500 to 800 amperes inclusive are of the bus type and are supported by the buses or the stud of the oil circuit breaker, no bases being required due to the light weight of these transformers.

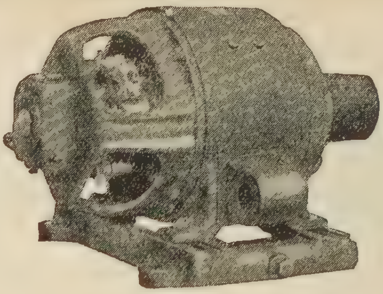
Cat. No.	Primary Capacity in Amperes	Ratio	Shipping Weight Pounds	Price Each
216838	5	1–1	44	$53.00
216839	10	2–1	44	53.00
216841	15	3–1	44	53.00
216842	20	4–1	44	53.00
216843	25	5–1	44	53.00
216844	30	6–1	44	53.00
216845	40	8–1	44	53.00
216846	50	10–1	44	53.00
216847	60	12–1	44	53.00
216848	75	16–1	44	53.00
216849	100	20–1	44	53.00
216850	125	25–1	44	54.00
216851	150	30–1	44	54.00
216852	200	40–1	44	55.00
216853	250	50–1	44	55.00
216854	300	60–1	44	55.00
216855	350	70–1	44	56.00
246264	400	80–1	44	56.00
246265	500	100–1	44	56.00
246266	600	120–1	44	56.00
246267	800	160–1	44	56.00

All transformers are provided with an additional turn on secondary for ammeters only.

These transformers are tested at 5000 volts between primary and all other parts, and at 2500 volts between secondary and ground.

G-E Type B Direct Current Motors

Ball or Sleeve Bearings, 115 or 230 Volts



Constant Speed

These motors are particularly suitable for a wide range of industrial applications, such as driving pumps, fans, blowers, line shafting and similar equipment requiring continuous operation and fairly close speed regulation. The h.p. ratings are based on continuous duty at 40° C.

Constant Speed—Shunt or Compound-Wound

On all constant speed motors, speed may be increased 25% by field control and reduced 50% by armature control.

Frame No.	H.P. at 40°	Full Load Speed R.P.M.	Max. Speed by Field Control, R.P.M.	**Sleeve Bearings Each
204	½	850	1750	$91.00
204	¾	1150	1725	85.00
224	....	850	1700	100.00
204	1	1750	2200	82.00
204	....	1150	1725	96.00
225	....	850	1700	110.00
204	1½	3500	3500	97.00
224	....	1750	2200	93.00
224	....	1150	1725	110.00
254	....	850	1700	177.00
224	2	3500	3500	114.00
225	....	1750	2200	104.00
225	....	1150	1725	129.00
254	....	850	1700	200.00
224	3	3500	3500	119.00
225	....	1750	2200	126.00
254	....	1150	1725	195.00
284	....	850	1700	344.00
225	5	3500	3500	156.00
254	....	1750	2200	203.00
284	....	1150	1725	247.00
254	7½	3500	3500	300.00
284	....	1750	2200	346.00
284	10	3500	3500	345.00

Adjustable Speed—Shunt-Wound

Motors are available for these applications requiring speed adjustment in ratios 3:1 or greater.

Frame No.	Constant H.P. All Speeds 1 Hour 50° C. Rise H.P.	Basic Full Load R.P.M.	*Constant H.P. 40° C. Rise Continuous H.P.	Basic Full Load R.P.M.	†Tapered H.P. 40° C. Rise Continuous H.P.	Basic Full Load R.P.M.	**Sleeve Bearings 115 Volts Each	**Sleeve Bearings 230 Volts Each
204	½	650	...	...	....	...	$100.00	$96.00
204	¾	800	½	850	½ to ¾	800	104.00	99.00
224	¾	650	½	700	½ to ¾	650	116.00	110.00
224	1	800	¾	850	¾ to 1	800	128.00	122.00
225	1	650	¾	700	¾ to 1	650	143.00	136.00
225	1½	800	1	850	1 to 1½	800	157.00	150.00
254	1½	600	1	650	1 to 1½	600	209.00	200.00
254	2	700	1½	750	1½ to 2	700	229.00	218.00
284	2	500	1½	550	1½ to 2	500	275.00	261.00
284	3	700	2	750	2 to 3	700	271.00	258.00

*Constant h.p.: from basic speed upward to 150%, temperature will not exceed 50° C. rise; above 150% of basic speed the temperature will not exceed 40° C. rise.

**For ball bearings add 5% to sleeve bearing price, minimum addition $4.00.

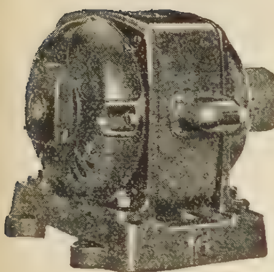
†Tapered h.p.: from basic speed upward to 106%, motor delivers minimum rated h.p., temperature not to exceed 50° C. rise; 40° C. rise is not exceeded at speeds above 150% of basic speed.

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

G-E Single-Phase Motors

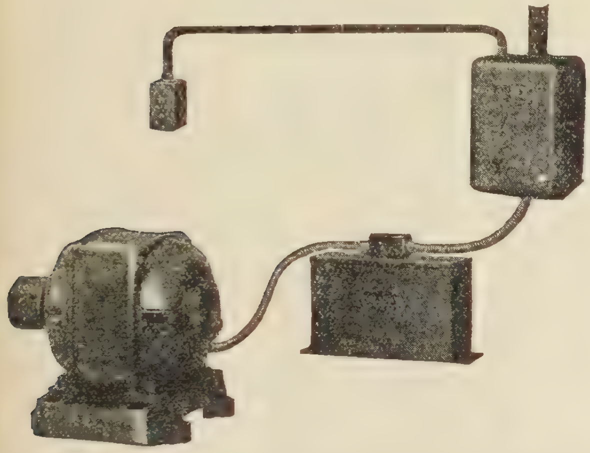
¼ to 10 H.P., 60 Cycles, 220 Volts

Type SCR



The Type SCR motor is a constant-speed repulsion-induction single-phase motor intended for use in general purpose applications. This motor combines the high starting torque of the repulsion motor with the excellent speed characteristics of an induction motor, and is consequently a successful motor for use in a wide range of industrial applications.

Type KC



Type KC Motor, Capacitor, Starter and Push-Button Station

For three different classes of duties, as follows:

1.—General purpose constant speed capacitor motors. These motors are suitable for application where quiet operation, freedom from radio interference or high power factor is desired and where regulations require enclosure of commutator type motors. In order to secure quiet operation the motors should be loaded to at least 50% of full load.

Suitable applications include centrifugal pumps, refrigeration compressors, conveyors, garage equipment, etc. Motors for such applications as elevators, washing machines, etc., are special and information will be furnished upon application.

2.—High torque constant speed capacitor motor for fan duty. Suitable for belt-driven fans—quiet operation is the most important characteristic and in order to secure quiet operation the motor should be loaded to at least 50% of full load.

The two types above are designed to use a definite type and size of capacitor as indicated in the motor nameplate. Capacitor unit consists of a running capacitor, a starting capacitor and a relay, all mounted in a metal enclosing case. The running capacitor is continuously rated and is permanently connected in the motor circuit. The starting capacitor is intermittently rated and is disconnected from motor circuit during period of starting by a relay.

3.—Low torque constant speed capacitor motors for fan duty. Suitable for direct connected fans only. Here too, quiet operation is the most important consideration.

Motor is designed to use a definite type and size of capacitor which is permanently connected in the motor circuit and is suitable for continuous duty.

G-E Single-Phase Motors

Types SCR and KC

¼ to 10 H.P., 60 Cycles, 220 Volts

The following list of ratings of types SCR and KC single phase motors cover sizes and designs which meet the majority of application requirements usually found in industry.

For additional information and for single phase motors with mechanical or electrical variations not provided for by the motors listed here refer to our nearest house.

			Type SCR Motor		Type KC Motor Only: General Purpose and Fan Duty High Torque		Type KC Motor Only: Fan Duty Low Torque	
H.P. at 40° C.	Frame No.	Sync. Speed R.P.M.	Sleeve Bearings Each	Ball Bearings Each	Sleeve Bearings Each	Ball Bearings Each	Sleeve Bearings Each	Ball Bearings Each
¼	224	720	...	...	$102	$107	$93	$97
	225	600	...	...	115	121	106	110
⅓	224	900	...	...	79	83	70	74
	224	720	...	...	115	121	106	111
	254	600	...	...	140	147	132	137
½	224	900	$77	$81	91	96	81	85
	224	720	...	...	137	144	127	132
	254	600	...	...	151	159	142	146
¾	204	1200	60	64	83	87	71	75
	225	900	100	105	109	114	97	100
	225	720	...	...	154	162	142	146
	255	600	...	...	161	169	149	155
1	204	1800	46	50	85	89	71	75
	224	1200	77	81	100	105	87	91
	254	900	123	129	133	140	119	123
	254	720	...	...	185	194	172	178
1½	204	3600	75	79	108	113	91	95
	224	1800	57	61	104	109	87	91
	225	1200	100	105	125	130	106	110
	254	900	146	153	162	170	144	149
2	224	3600	92	97	131	138	110	114
	A225	1800	75	79	125	131	104	108
	254	1200	146	153	154	162	134	138
	255	900	175	184	196	206	177	182
3	224	3600	120	126	174	183	146	151
	A225	1800	96	101	166	174	138	142
	255	1200	174	184	209	219	182	186
	863	900	218	229	...	...	...	...
5	225	3600	146	153	246	258	203	208
	254	1800	150	158	236	248	197	202
	863	1200	218	229	...	...	...	...
	866	900	294	309	...	...	...	...
7½	846	3600	219	229	...	...	...	...
	863	1800	218	229	...	...	...	...
	868	1200	276	290	...	...	...	...
10	867	3600	...	291	...	...	...	...
	866	1800	271	285	...	...	...	...

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

Frame Nos. 204 to 225 inclusive, all speeds 1800 r.p.m. and lower, have wool-yarn-packed bearings. Speeds higher than 1800 r.p.m., also frame Nos. 254 and 255, all speeds, have oil-ring-lubricated sleeve bearings.

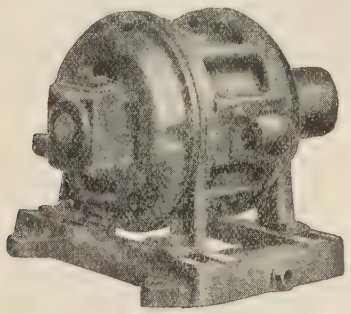
Where quiet operation is essential, sleeve-bearing motors should be quoted in preference to ball-bearing motors.

Voltage and frequencies other than listed, on application.

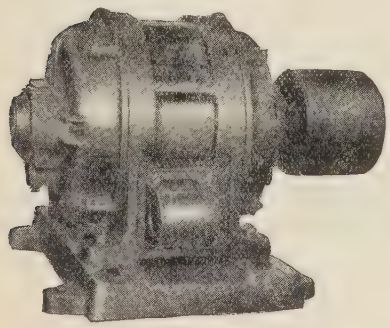
G-E General Purpose Squirrel-Cage Induction Motors

¼ to 75 H.P., Constant-Speed, 2 and 3-Phase, 60 Cycles, Continuous Duty, 40° C. Rise

Type K-Normal Torque, Normal Starting Current



½ to 15 H.P., 1800 R.P.M. Motor



15 to 75 H.P., 1800 R.P.M. Motor

This motor is usually applied to the large majority of constant-speed drives. It is the squirrel-cage motor best fitted for driving pumps, fans, blowers, line shafting and similar equipment requiring continuous operation with a fairly constant load.

Type KF—Normal Torque, Low Starting Current

The essential difference between the Type KF and the Type K motors is in the design of the rotor slot. The rotor in the Type KF motor is so designed as to give a low starting current, permitting the motor to be thrown directly across the line in sizes 30 h.p. and smaller. Obviously, this permits the use of a small, light, and compact magnetic starter. The Type KF motor may be applied to any drive for which the Type K motor is suitable. It should be chosen where it is desirable to keep the first cost of apparatus as low as possible or where limitations as to weight or space make it desirable to use as small and compact control as is possible.

Type KG—High Torque, Low Starting Current

Intended to supply the needs for motors having a higher per cent torque at starting than can be supplied by either Types K or KF motors with full voltage applied, yet having the per cent of starting current equal to or lower than the Type KF motor.

The Type KG motor is recommended for such drives as compressors without unloading valves, conveyors which must be started loaded, and other applications requiring high starting torque. The Type KG motor should be used only where the driven mechanism will not be injured by the sudden application of the starting torque of this motor. This caution applies especially to drives or driven machines utilizing belts (either flat belts of V-belts), chains or other flexible or slack elements.

G-E General Purpose Squirrel-Cage Induction Motors

¼ to 10 H.P., Constant Speed, 2 and 3-Phase, 60 Cycles, Continuous Duty, 40° C. Rise
Type K—Normal Torque, Normal Starting Current
Type KF—Normal Torque, Low Starting Current
Type KG—High Torque, Low Starting Current
110, 220, 440 and 550 Volts

H.P. at 40° C.	Frame No.	Sync. Speed R.P.M.	Type K Sleeve Bearings Each	Type K Ball Bearings Each	Type KF Sleeve Bearings Each	Type KF Ball Bearings Each	Type KG Sleeve Bearings Each	Type KG Ball Bearings Each
¼	224	720	$77	$81	...	...	...	...
	225	600	83	87	..	..	..	...
½	204	900	53	57	...	..	...	...
	224	720	86	90	...	...	...	...
	225	600	92	97	...	...	...	...
¾	204	1200	48	52	...	...	...	...
	224	900	63	67	..	...	...	...
	225	720	94	99	..	...	...	...
	254	600	102	107	...	...	..	...
	284	514	122	128	...	..	...	...
1	67	3600	40	...	...	.	...	...
	204	1800	41	45	...	..	...	...
	204	1200	52	56	...	...	...	...
	225	900	71	75	...	...	.	...
	254	720	106	111	..	..	..	...
	254	600	113	119	..	...	...	...
	284	514	146	153	...	...	...	...
			220, 440 and 550 Volts					
1½	*204	3600	57	61	...	...	...	...
	224	1800	52	56	..	...	...	...
	224	1200	61	65	...	...	..	...
	254	900	85	89	...	...	...	...
	254	720	122	128	...	...	...	...
	284	600	127	133	..	..	...	...
	324	514	159	167	...	...	...	...
2	*224	3600	62	66	...	...	..	...
	225	1800	57	61	...	...	...	...
	225	1200	67	71	...	...	...	...
	254	900	94	99	...	..	.	...
	284	720	129	135	...	...	...	...
	324	600	139	146	...	...	...	...
	326	514	177	186	...	...	...	...
3	*224	3600	71	75	...	...	...	...
	225	1800	64	68	...	...	$74	$78
	254	1200	81	85	...	...	93	98
	284	900	109	114	...	...	125	131
	234	720	139	146	...	...	...	...
	326	600	162	170	...	...	...	...
	365	514	197	207	...	...	...	...
5	*225	3600	88	92	...	...	...	...
	254	1800	80	84	...	...	92	97
	284	1200	103	108	...	...	118	124
	324	900	136	143	...	...	156	164
	326	720	185	194	...	...	...	...
	365	600	223	234	...	...	...	...
	404	514	257	269	...	...	...	...
7½	*254	3600	...	...	$106	$111	...	...
	284	1800	98	103	103	108	113	119
	324	1200	128	134	134	141	147	154
	326	900	162	170	170	179	186	195
	365	720	241	253	253	266	...	...
	404	600	263	276	276	290	...	...
	405	514	310	326	...	...	...	...
10	*284	3600	...	...	127	133	...	...
	324	1800	115	121	121	127	133	140
	326	1200	151	159	159	167	174	183
	365	900	188	197	197	207	216	227
	404	720	272	286	286	300	...	...
	405	600	301	316	316	332	...	...
	444	514	357	375	...	...	...	...

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

These standard 60-cycle open motors can in general be operated on 50-cycle circuits although they will not necessarily meet the standards established for 60-cycle operation and will have a slightly greater temperature rise than at 60 cycles. Synchronous speeds at 50 cycles will be 5/6 of those at 60 cycle. Control may be different.

*Recommended only for direct connection and prices cover motors with standard straight short shafts.

G-E General Purpose Squirrel-Cage Induction Motors

15 to 75 H.P., Constant Speed, 2 and 3-Phase, 60 Cycles, Continuous Duty, 40° C. Rise

Type K—Normal Torque, Normal Starting Current
Type KF—Normal Torque, Low Starting Current
Type KG—High Torque, Low Starting Current

220, 440 and 550 Volts

H.P. at 40° C.	Frame No.	Sync. Speed R.P.M.	Type K Sleeve Bearings Each	Type K Ball Bearings Each	Type KF Sleeve Bearings Each	Type KF Ball Bearings Each	Type KG Sleeve Bearings Each	Type KG Ball Bearings Each
15	*324	3600	...	...	$163	$171	...	...
	326	1800	$148	$155	155	163	$170	$179
	365	1200	192	202	202	212	221	232
	404	900	232	244	244	256	267	280
	405	720	330	347	347	364	...	...
	444	600	367	385	385	404	...	...
	445	514	436	458	...	...	...	...
20	*326	3600	...	...	204	214	...	...
	364	1800	185	194	194	204	213	224
	404	1200	235	247	247	259	270	284
	405	900	281	295	295	310	323	339
	444	720	387	406	406	426	...	...
	445	600	430	451	451	474	...	...
	504	514	517	543	...	...	...	...
25	*364S	3600	...	...	242	254	...	...
	365	1800	219	230	230	242	252	265
	405	1200	271	285	285	299	312	328
	444	900	322	338	338	355	370	389
	445	720	433	455	455	478	...	...
	504	600	502	527	527	554	...	...
	505	514	578	607	...	...	...	...
30	*365S	3600	...	...	281	295	...	...
	405	1800	254	267	267	280	292	307
	444	1200	309	324	324	340	355	373
	445	900	362	380	380	399	416	437
	504	720	479	503	503	528	...	...
	505	600	530	557	557	585	...	...
40	*404S	3600	...	...	350	368	...	...
	444	1800	318	334	334	351	366	384
	445	1200	368	386	386	405	423	444
	504	900	432	454	454	477	497	522
	505	720	560	588	616	647	...	...
50	*405S	3600	...	...	414	435	...	...
	*445S	1800	376	395	395	415	432	454
	504	1200	421	442	442	464	484	508
	505	900	505	530	530	557	581	610
60	444Z	3600	...	...	495	520	...	...
	504S	1800	450	473	473	497	518	544
	505	1200	511	537	537	564	588	617
75	*445Z	3600	...	...	672	706	...	...
	*505S	1800	530	557	583	613	610	641
			2200 Volts					
30	444	1200	$456	$479	$479	$503	...	...
	445	900	532	559	559	587	...	...
	504	720	651	684	...	...	...	...
	505	600	698	732	...	...	...	...
40	444	1800	431	453	453	476	...	...
	445	1200	520	546	546	573	...	...
	504	900	607	637	637	669	...	...
	505	720	708	743	...	...	...	...
50	*445S	1800	491	516	516	542	...	...
	504	1200	576	605	605	635	...	...
	505	900	672	706	706	741	...	...
60	444Z	3600	...	...	606	636	...	...
	504S	1800	552	580	580	609	...	...
	505	1200	639	671	671	705	...	...
75	*445Z	3600	...	...	820	861	...	...
	*505S	1800	629	660	692	727	...	...

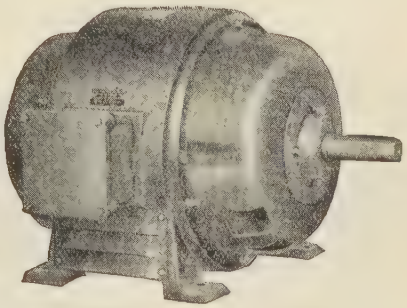
Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

These standard 60-cycle open motors can in general be operated on 50-cycle circuits although they will not necessarily meet the standards established for 60-cycle operation and will have a slightly greater temperature rise than at 60 cycles. Synchronous speeds at 50 cycles will be 5/6 of those at 60 cycle. Control may be different.

*Recommended only for direct connection and prices cover motors with standard straight short shafts.

G-E Type K Squirrel-Cage Splash-Proof Motors

Ball-Bearing—¼ to 25 H.P., Constant Speed, 2 and 3-Phase, 60 Cycles



Typical of Frame Nos. 202-236

These motors are constructed to operate under conditions subject to dripping and splashing liquids, particularly in certain industries, such as dairies, meat packing plants, etc. where, for obvious reasons, it is necessary to "hose-down" the equipment regularly, at least once a day. Since in order to meet these conditions, these motors are constructed to exclude falling water or other materials coming directly at the motor, at an angle not exceeding 100° from the vertical, they can and have been used successfully out of doors without pump-house or other protection, in those localities where the hazards of climate are not greater than those encountered in the conditions for which they are designed.

110, 220, 440 and 550 Volts

H.P. at 50° C.	Frame No.	Sync. Speed R.P.M.	Each	H.P. at 50° C.	Frame No.	Sync. Speed R.P.M.	Each
¼	224	720	$83.00	¾	254	600	$110.00
	225	600	90.00		284	514	132.00
½	204	900	59.00	1	204	1800	46.00
	224	720	93.00		204	1200	58.00
	225	600	100.00		225	900	77.00
¾	204	1200	54.00		254	720	114.00
	224	900	69.00		254	600	123.00
	225	720	102.00		284	514	158.00
			220, 440 and 550 Volts				
1½	*204	3600	$63.00	7½	324	1200	$138.00
	224	1800	58.00		326	900	175.00
	224	1200	67.00		365	720	261.00
	254	900	92.00		404	600	284.00
	254	720	132.00		405	514	336.00
	284	600	137.00	10	324	1800	125.00
	324	514	172.00		326	1200	164.00
2	*224	3600	68.00		365	900	203.00
	225	1800	53.00		404	720	295.00
	225	1200	73.00		405	600	325.00
	254	900	102.00		444	514	386.00
	284	720	139.00	15	326	1800	160.00
	324	600	150.00		365	1200	208.00
	326	514	192.00		404	900	251.00
3	*224	3600	77.00		405	720	357.00
	225	1800	70.00		444	600	397.00
	254	1200	88.00		445	514	472.00
	284	900	117.00	20	364	1800	200.00
	234	720	150.00		404	1200	254.00
	326	600	175.00		405	900	304.00
	365	514	213.00		444	720	418.00
5	*225	3600	95.00		445	600	465.00
	254	1800	87.00		504	514	559.00
	284	1200	111.00	25	365	1800	237.00
	324	900	147.00		405	1200	294.00
	326	720	200.00		444	900	348.00
	365	600	241.00		445	720	469.00
	404	514	278.00		504	600	543.00
7½	284	1800	106.00		505	514	625.00

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

*These motors are recommended only for direct connection and prices cover motors with standard straight short shafts.

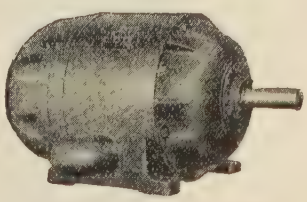
G-E Totally-Enclosed Squirrel-Cage Induction Motors

Fan-Cooled, Ball-Bearing, Constant Speed

½ to 5 H.P., 2 and 3-Phase, 60 Cycles

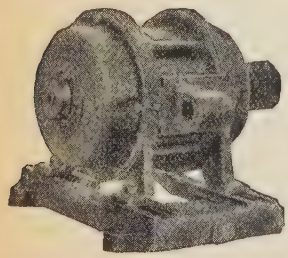
Type K

Types K or KF, Fan-Cooled
Frame Nos. 224-326



Types K or KF, Fan-Cooled
Frame Nos. 365-506

For those applications requiring totally-enclosed motors, the General Electric Company offers a standard (for sizes 1½ h.p., 900 r.p.m. and smaller) totally-enclosed, non-ventilated motor. These motors have ample radiating surface to assure proper cooling without the use of external fans.



Type K, Non-Ventilated

For larger motors the standard is the totally-enclosed fan-cooled construction. The construction involves essentially a totally-enclosed motor surrounded by an external housing. A single fan, mounted between motor endshield and the external protecting endshield at the end opposite the shaft extension, draws air through the protecting screen, forces it across the surface of the stator punchings and out the drive end, providing positive and direct ventilation. This design provides a strong and rigid construction and permits a greater output per pound of material than is possible with ordinary methods of total enclosure, with the result that the mounting dimensions of totally-enclosed fan-cooled motors are identical with those of open motors of the same rating in all except the largest sizes.

These motors are of special design to operate successfully under adverse conditions of abrasive dust, lint and moisture. When specified on order, motors will be furnished with Underwriters' label, indicating their suitability for Class II Group G hazardous dust locations.

110, 220, 440 and 550 Volts

H.P. at 55° C.	Frame No.	Sync. Speed R.P.M.	Type K Each	H.P. at 55° C.	Frame No.	Sync. Speed R.P.M.	Type K Each
½	204	900	*$62.00	1	204	1800	*$54.00
¾	204	1200	*57.00		204	1200	*61.00
	224	900	*73.00		225	900	*81.00

220, 440 and 550 Volts

1½	224	1800	*$62.00	3	254	1200	$117.00
	224	1200	*70.00		284	900	157.00
	254	900	*97.00		234	720	208.00
2	224	3600	93.00		326	600	229.00
	225	1800	87.00	5	225	3600	119.00
	225	1200	98.00		254	1800	116.00
	254	900	131.00		284	1200	151.00
	284	720	177.00		324	900	202.00
	324	600	207.00		326	720	252.00
3	224	3600	102.00		365	600	319.00
	225	1800	96.00		...	....	.....

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

*Enclosed non-ventilated frames.

G-E Totally-Enclosed Squirrel-Cage Induction Motors

Fan-Cooled, Ball-Bearing, Constant Speed

7½ to 75 H.P., 2 and 3-Phase, 60 Cycles

Types K and KF

220, 440 and 550 Volts

H.P. at 55° C.	Frame No.	Sync. Speed R.P.M.	Type K Each	Type KF Each
7½	254	3600	.....	$143.00
	284	1800	$151.00	151.00
	324	1200	202.00	202.00
	326	900	237.00	237.00
	365	720	336.00	336.00
	404	600	390.00	390.00
10	284	3600	.....	175.00
	324	1800	189.00	189.00
	326	1200	226.00	226.00
	365	900	294.00	294.00
	404	720	399.00	399.00
	405	600	428.00	428.00
15	324	3600	.....	230.00
	326	1800	223.00	223.00
	365	1200	298.00	298.00
	404	900	371.00	371.00
	405	720	456.00	456.00
	444	600	635.00	635.00
20	326	3600	.....	271.00
	364	1800	293.00	293.00
	404	1200	375.00	375.00
	405	900	424.00	424.00
	444	720	672.00	672.00
	445	600	744.00	744.00
25	364S	3600	.....	341.00
	365	1800	329.00	329.00
	405	1200	414.00	414.00
	444	900	557.00	557.00
	445	720	750.00	750.00
	504	600	950.00	950.00
30	365S	3600	.....	410.00
	405	1800	396.00	396.00
	444	1200	536.00	536.00
	445	900	629.00	629.00
	504	720	908.00	908.00
	505	600	1004.00	1004.00
40	404S	3600	.....	542.00
	444	1800	526.00	542.00
	445	1200	606.00	624.00
	504	900	779.00	801.00
	505	720	1010.00	1066.00
50	405S	3600	.....	696.00
	445S	1800	678.00	697.00
	504	1200	760.00	780.00
	505	900	908.00	933.00
60	444Z	3600	.....	832.00
	504S	1800	811.00	834.00
	505	1200	920.00	945.00
75	445Z	3600	.....	1153.00
	505S	1800	1060.00	1113.00
		2200 Volts		
30	444	1200	$684.00	$684.00
	445	900	800.00	800.00
	504	720	1079.00	1079.00
	505	600	1172.00	1172.00
40	444	1800	639.00	661.00
	445	1200	759.00	785.00
	504	900	955.00	985.00
	505	720	1158.00	1016.00
50	445S	1800	793.00	817.00
	504	1200	915.00	1065.00
	505	900	1074.00	1108.00
60	444Z	3600	.....	944.00
	504S	1800	912.00	940.00
	505	1200	1048.00	1079.00
75	445Z	3600	.....	1302.00
	505S	1800	1159.00	1222.00

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

G-E Totally-Enclosed Squirrel-Cage Induction Motors

Fan-Cooled, Ball-Bearing, Explosion-Proof For Class I, Group D, Hazardous Gas Conditions

Constant Speed, 2 and 3-Phase, 60 Cycles

Types K and KF

The General Electric Company has a complete line of explosion-proof motors for Class I Group D hazardous gas conditions as defined by the National Electric Code. In sizes 1½ h.p., 900 r.p.m. and smaller these motors are built in totally-enclosed, non-ventilated frames. In larger sizes they are built in totally-enclosed, fan-cooled frames. These motors have been tested and listed by Underwriters' Laboratories and are furnished with a label indicating their suitability for those locations where gas involved is no more hazardous than high-test gasoline vapor.

220, 440 and 550 Volts

H.P. at 55° C.	Frame No.	Sync. Speed R.P.M.	Type K Each	Type KF Each	Approx. Ship. Wt., Lbs.
½	*204	900	$82.00	.....	65
	*224	720	114.00	.....	90
	*225	600	121.00	.....	110
¾	*204	1200	77.00	.....	65
	*224	900	93.00	.....	90
	*225	720	125.00	.....	110
	254	600	133.00	.....	190
1	*204	3600	93.00	.....	65
	*204	1800	75.00	.....	65
	*204	1200	81.00	.....	65
	*225	900	120.00	.....	110
	254	720	165.00	.....	190
	254	600	171.00	.....	190
1½	*224	3600	99.00	.....	90
	*224	1800	100.00	.....	90
	*225	1200	110.00	.....	110
	*254	900	143.00	.....	140
	254	720	182.00	.....	190
	284	600	200.00	.....	270
2	224	3600	111.00	.....	120
	225	1800	105.00	.....	130
	225	1200	116.00	.....	130
	254	900	152.00	.....	190
	284	720	201.00	.....	270
	324	600	238.00	.....	340
3	224	3600	120.00	.....	120
	225	1800	114.00	.....	130
	254	1200	139.00	.....	190
	284	900	182.00	.....	270
	324	720	234.00	.....	340
	326	600	260.00	.....	410
5	225	3600	137.00	.....	130
	254	1800	138.00	.....	190
	284	1200	175.00	.....	270
	324	900	234.00	.....	340
	326	720	284.00	.....	410
	365	600	364.00	.....	770
7½	254	3600	.....	$165.00	190
	284	1800	175.00	175.00	270
	324	1200	234.00	234.00	340
	326	900	269.00	269.00	410
	365	720	381.00	.....	770
	404	600	450.00	.....	930
10	284	3600	.....	198.00	270
	324	1800	220.00	220.00	340
	326	1200	258.00	258.00	410
	365	900	339.00	339.00	770
	404	720	460.00	.....	930
	405	600	489.00	.....	1000

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

*Totally-enclosed non-ventilated.

All motors listed above may be started with full-voltage, but the Type K, 7½ and 10-h.p. motors have starting current values slightly exceeding N.E.L.A. recommendations. Reduced-voltage starting is a requirement of many operating companies; therefore, before quoting, be sure that full-voltage starting will be acceptable to those supplying the power.

G-E Totally-Enclosed Squirrel-Cage Induction Motors

Fan-Cooled, Ball-Bearing, Explosion-Proof For Class I, Group D, Hazardous Gas Conditions

Constant Speed, 2 and 3-Phase, 60 Cycles

Types K and KF

220, 440 and 550 Volts

H.P. at 55° C.	Frame No.	Sync. Speed R.P.M.	Type K Each	Type KF Each	Approx Ship. Wt., Lbs.
15	324	3600	.....	$261.00	340
	326	1800	$254.00	254.00	410
	365	1200	342.00	342.00	770
	404	900	432.00	432.00	930
	405	720	517.00	.....	1000
	444	600	726.00	.....	1250
20	365S	3600	.....	316.00	730
	364	1800	338.00	338.00	710
	404	1200	436.00	436.00	930
	405	900	484.00	484.00	1000
	444	720	762.00	.....	1250
	445	600	835.00	.....	1370
25	404S	3600	.....	386.00	950
	365	1800	374.00	374.00	770
	405	1200	474.00	474.00	1000
	444	900	647.00	647.00	1250
	445	720	841.00	.....	1370
	505	600	1041.00	.....	1820
30	405S	3600	.....	471.00	950
	405	1800	456.00	456.00	1000
	444	1200	627.00	627.00	1250
	445	900	720.00	720.00	1370
	505	720	998.00	.....	1820
	506	600	1095.00	.....	2050
40	444Z	3600	.....	630.00	1270
	444	1800	617.00	633.00	1250
	445	1200	697.00	715.00	1370
	505	900	810.00	892.00	1820
	506	720	1101.00	.....	2050
50	445Z	3600	.....	188.00	1390
	444S	1800	768.00	788.00	1270
	505	1200	851.00	871.00	1820
	506	900	998.00	1024.00	2050
60	505Z	3600	922.00	.....	1870
	505S	1800	901.00	924.00	1870
	506	1200	1010.00	1036.00	2050
75	506Z	3600	.....	1244.00	2050
	506S	1800	1151.00	1204.00	2050
			2200 Volts		
40	504Z	3600	.....	$777.00	1660
	504	1800	$730.00	751.00	1600
	505	1200	849.00	876.00	1820
	506	900	1045.00	1074.00	2050
50	505Z	3600	.....	915.00	1870
	505S	1800	883.00	908.00	1870
	506	1200	1006.00	1035.00	2050
	6325	900	1165.00	1199.00	2760
60	506Z	3600	1039.00	.....	2050
	506S	1800	1003.00	1031.00	2050
	506	1200	1039.00	1170.00	2050
75	506Z	3600	.....	1393.00	2050
	506S	1800	1250.00	1313.00	2050

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

All motors listed above may be started with full-voltage, but the Type K at all speeds, and the Type KF 20 and 30-h.p. at 3600 r.p.m. as well as 40-h.p. and larger sizes at all speeds, have starting current values slightly exceeding N.E.L.A. recommendations. Reduced-voltage starting is a requirement of many operating companies; therefore, before quoting, be sure that full-voltage starting will be acceptable to those supplying the power.

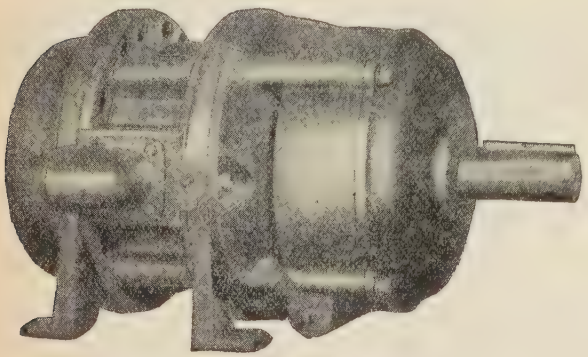
G-E General Purpose Gear Motors

40° C., Continuous Rated

Types K, KG and M—2 and 3-Phase, 60 Cycles, 220, 440 and 550 Volts

Type B—D.C., Shunt-Wound, 115 or 230 Volts

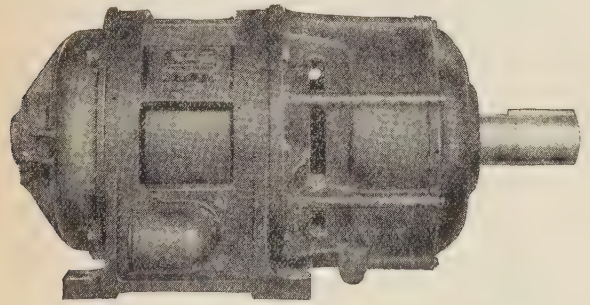
Type SCR—Single-Phase, 60 Cycles, 110-220 Volts



Typical of Riveted-Frame, Squirrel-Cage Induction Designs, Single-Reduction

The G-E Gear Motor consists of a highly efficient straight-line helical gear reduction unit built into the end frame of a standard ball-bearing, normal speed motor. Connection to the driven machine may be either direct, or through a belt, chain or gear. The listed low speed r.p.m. are based on 1800 r.p.m. synchronous speed and full load r.p.m. will be slightly lower depending on the variation of full load motor speed from synchronous speed. Access to entire gear mechanism is obtained by removing front cover plate. Gears run in oil. Oil is kept in and dust kept out by felt shields on shaft apertures. Pinions are of G-E Textolite and with helical gears eliminate the noises associated with geared speed reduction.

Gear motors may be furnished for vertical or flange mounting and with all mechanical and electrical modifications available with standard general purpose motors.



Typical of Skeleton-Frame, Squirrel-Cage Induction Designs, Single-Reduction

In applying gear motors the following information should be obtained and sent with order:

Torque—starting (high) (low); accelerating (high) (low); running: constant torque, constant speed, adjustable speed; variable torque, periodic; intermittent, varies with speed, give duty cycle, including time and magnitude.

Speed—constant, variable, adjustable.

Load—continuous (8 to 10 hours daily) (24 hours daily); intermittent, frequent starts and sudden stops, reversing.

Method of drive—directly mounted, coupled, belt or chain (give type of belting and relative position of shafts), pinion.

Space limitations.

Ambient conditions—hazards, temperature, protection, atmosphere (abrasive) (corrosive) (explosive) (excessive moisture).

Attention—regular (skilled), uncertain.

The normal control for the type of motor involved should be selected from the standard G-E control shown on other pages of this catalogue.

G-E General Purpose Gear Motors

40° C., Continuous Rated

Types K, KG and M—2 and 3-Phase, 60 Cycles, 220, 440 and 550 Volts

Type B—D.C., Shunt-Wound, 115 or 230 Volts

Type SCR—Single-Phase, 60 Cycles, 110-220 Volts

H.P. 40° C. Cont.	Gear Motor Frame	Low Speed R.P.M.	Type K Each	Type KG Each	Type M Each	Type B Each	Type SCR Each
¾	202124	600, 572, 540, 507	$71	...	...	$105	$75
	202124	475, 438, 396, 360	73	...	...	107	77
	202124	323, 300, 273, 243	77	...	...	111	81
	202128	225, 200, 174, 154	83	...	...	117	87
	202224	145, 135, 124, 114	89	...	...	123	93
	202228	103, 93, 83, 71	100	...	...	134	104
	202332	63.5, 56.5, 49, 43.5	113	...	...	147	117
	202332	40.5, 37.5, 34, 31	122	...	...	156	126
	202336	27.5, 25.5, 23, 21	133	...	...	167	137
	202340	19.5, 17, 15, 13	150	...	...	184	154
1	204124	600, 572, 540, 507	84	...	...	121	94
	204124	475, 438, 396, 360	86	...	...	123	96
	204128	323, 300, 273, 243	90	...	...	127	100
	204132	225, 200, 174, 154	98	...	...	135	108
	204228	145, 135, 124, 114	107	...	...	144	117
	204232	103, 93, 83, 71	119	...	...	156	129
	204332	63.5, 56.5, 49, 43.5	135	...	...	172	145
	204336	40.5, 37.5, 34, 31	145	...	...	182	155
	204340	27.5, 25.5, 23, 21	160	...	...	197	170
	204344	19.5, 17, 15, 13	180	...	...	217	190
1½	224128	600, 572, 540, 507	97	...	$162	139	116
	224128	475, 438, 396, 360	100	...	165	142	119
	224132	323, 390, 273, 243	106	...	171	148	125
	224136	225, 200, 174, 154	116	...	181	158	135
	224232	145, 135, 124, 114	124	...	189	166	143
	224236	103, 93, 83, 71	140	...	205	182	159
	224340	63.5, 56.5, 49, 43.5	159	...	224	201	178
	224340	40.5, 37.5, 34, 31	173	...	238	215	192
	224344	27.5, 25.5, 23, 21	191	...	256	223	210
	224348	19.5, 17, 15, 13	215	...	280	247	234
2	*225132	600, 572, 540, 507	110	...	175	158	140
	*225132	475, 438, 396, 360	112	...	177	160	142
	*225136	323, 300, 273, 243	119	...	184	167	149
	*225140	225, 200, 174, 154	130	...	195	178	160
	*225236	145, 135, 124, 114	140	...	205	188	170
	*225240	103, 93, 83, 71	158	...	223	206	188
	*225340	63.5, 56.5, 49, 43.5	181	...	246	229	211
	*225344	40.5, 37.5, 34, 31	197	...	262	245	227
	*225348	27.5, 25.5, 23, 21	219	...	284	267	249
	*225352	19.5, 17, 15, 13	249	...	314	297	279
3	225136	600, 572, 540, 507	123	$133	198	190	174
	225136	475, 438, 396, 360	126	136	201	193	177
	225140	323, 300, 273, 243	133	143	208	200	184
	225144	225, 200, 174, 154	145	155	220	212	196
	225240	145, 135, 124, 114	156	166	231	223	207
	225244	103, 93, 83, 71	177	187	252	244	228
	225344	63.5, 56.5, 49, 43.5	204	214	279	271	255
	225348	40.5, 37.5, 34, 31	224	234	299	291	275
	225352	27.5, 25.5, 23, 21	249	259	324	316	300
	225356	19.5, 17, 15, 13	285	295	360	352	336
5	254140	600, 572, 540, 507	147	160	238	276	233
	254140	475, 438, 396, 360	150	163	241	279	236
	254144	323, 300, 273, 243	158	171	249	287	244

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

*For Type SCR motors, frame is A-225.

All types of gear motors are suitable for operation with standard listed controllers. Where full-voltage starting is used to obtain maximum starting torque of motor, the number of starts should be limited to 4 to 6 per day.

G-E General Purpose Gear Motors

40° C., Continuous Rated

Types K, KF, KG and M—2 and 3-Phase, 60 Cycles, 220, 440 and 550 Volts

Type B—D.C., Shunt-Wound, 115 or 230 Volts

Type SCR—Single-Phase, 60 Cycles, 110-220 Volts

(Continued)

H.P. 40° C. Cont.	Gear Motor Frame	Low Speed R.P.M.	Type K Each	Type KF Each	Type KG Each	Type M Each	Type B Each	Type SCR Each
5	254148	225, 200, 174, 154	$172	...	$185	$263	$301	$258
	254244	145, 135, 124, 114	184	...	197	275	313	270
	254248	103, 93, 83, 71	211	...	224	302	340	297
	254348	63.5, 56.5, 49, 43.5	244	...	257	335	373	330
	254352	40.5, 37.5, 34, 31	269	...	282	360	398	355
	254356	27.5, 25.5, 23, 21	301	...	314	392	430	387
	254360	19.5, 17, 15, 13	348	...	361	439	477	434
7½	284144	600, 572, 540, 507	178	$183	194	282	333	.
	284144	475, 438, 396, 360	183	188	199	287	338	.
	284148	323, 300, 273, 243	194	199	210	298	349	.
	284152	225, 200, 174, 154	212	217	228	316	367	.
	284248	145, 135, 124, 114	228	233	244	332	383	.
	284252	103, 93, 83, 71	261	266	277	365	416	.
	284352	63.5, 56.5, 49, 43.5	302	307	318	406	457	.
	284356	40.5, 37.5, 34, 31	335	340	351	439	490	.
	284360	27.5, 25.5, 23, 21	378	383	394	482	533	.
	284364	19.5, 17, 15, 13	437	442	453	541	592	...
10	324148	600, 572, 540, 507	221	227	238	342	...	.
	324148	475, 438, 396, 360	228	234	245	349	...	.
	324152	323, 300, 273, 243	240	246	257	361	. .	
	324156	225, 200, 174, 154	261	267	278	382	...	.
	324252	145, 135, 124, 114	279	285	296	400	...	...
	324256	103, 93, 83, 71	323	329	340	444	...	. .
	324356	63.5, 56.5, 49, 43.5	379	385	396	500	...	...
	324360	40.5, 37.5, 34, 31	421	427	438	542	...	...
	324364	27.5, 25.5, 23, 21	475	481	492	596	...	...
	324368	19.5, 17, 15, 13	555	561	572	676	...	...
15	326152	600, 572, 540, 507	274	281	297	456	...	...
	326152	475, 438, 396, 360	281	288	304	463	...	. .
	326156	323, 300, 273, 243	298	305	321	480	...	...
	326160	225, 200, 174, 154	324	331	347	506	...	...
	326256	145, 135, 124, 114	350	357	373	532	...	...
	326260	103, 93, 83, 71	405	412	428	587	...	. .
	326360	63.5, 56.5, 49, 43.5	474	481	497	656	...	...
	326364	40.5, 37.5, 34, 31	527	534	550	709	...	...
	326368	27.5, 25.5, 23, 21	596	603	619	778	...	...
	326372	19.5, 17, 15, 13	694	701	717	886	..	...
20	364156	600, 572, 540, 507	326	335	355	534	...	. .
	364156	475, 438, 396, 360	337	346	366	545	...	. .
	364160	323, 300, 273, 243	360	369	389	568	...	. .
	364164	225, 200, 174, 154	396	405	425	604	...	.
	364260	145, 135, 124, 114	430	439	459	638	...	...
	364264	103, 93, 83, 71	501	510	530	709	...	. .
	364364	63.5, 56.5, 49, 43.5	592	601	621	800	...	...
	364368	40.5, 37.5, 34, 31	664	673	693	872	...	...
	364372	27.5, 25.5, 23, 21	670	769	789	968	...	...
	364376	19.5, 17, 15, 13	890	899	919	1098	...	...
25	365156	600, 572, 540, 507	361	373	395	585	...	...
	365156	475, 438, 396, 360	373	385	407	597	...	.
	365160	323, 300, 273, 243	400	412	434	624	...	. .
	365164	225, 200, 174, 154	443	455	477	667	...	. .
	365260	145, 135, 124, 114	483	495	517	707	...	...
	365264	103, 93, 83, 71	565	577	599	789	...	. .

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

All types of gear motors are suitable for operation with standard listed controllers. Where full-voltage starting is used to obtain maximum starting torque of motor, the number of starts should be limited to 4 to 6 per day.

G-E General Purpose Gear Motors

40° C., Continuous Rated

Types K, KF, KG and M—2 and 3-Phase, 60 Cycles, 220, 440 and 550 Volts

(Continued)

H.P. 40° C. Cont.	Gear Motor Frame	Low Speed R.P.M.	Type K Each	Type KF Each	Type KG Each	Type M Each
25	365368	63.5, 56.5, 49, 43.5	$670	$682	$704	$894
	365372	40.5, 37.5, 34, 31	750	762	784	974
	365376	27.5, 25.5, 23, 21	855	867	889	1079
	365380	19.5, 17, 15, 13	1000	1012	1034	1124
30	405160	600, 572, 540, 507	415	428	455	650
	405160	475, 438, 396, 360	432	445	472	667
	405164	323, 300, 273, 243	467	480	507	702
	405168	225, 200, 174, 154	521	534	561	756
	405264	145, 135, 124, 114	570	583	610	805
	405268	103, 93, 83, 71	670	683	710	905
	405368	63.5, 56.5, 49, 43.5	790	803	830	1025
	405372	40.5, 37.5, 34, 31	890	903	930	1125
	405376	27.5, 25.5, 23, 21	1020	1033	1060	1255
	405380	19.5, 17, 15, 13	1200	1213	1240	1435
	444164	600, 572, 540, 507	482	499	532	742
	444164	475, 438, 396, 360	500	517	550	760
	444168	323, 300, 273, 243	538	555	588	798
	444172	225, 200, 174, 154	598	615	648	858
	444268	145, 135, 124, 114	650	667	700	910
	444272	103, 93, 83, 71	765	782	815	1025
	444372	63.5, 56.5, 49, 43.5	915	932	965	1175
	444376	40.5, 37.5, 34, 31	1030	1047	1080	1290
	444380	27.5, 25.5, 23, 21	1180	1197	1230	1440
	444384	19.5, 17, 15, 13	1400	1417	1450	1660
50	445164	600, 572, 540, 507	558	577	617	838
	445164	475, 438, 396, 360	580	599	639	860
	445168	323, 300, 273, 243	620	639	679	900
	445172	225, 200, 174, 154	695	714	754	975
	445268	145, 135, 124, 114	755	774	814	1035
	445272	103, 93, 83, 71	895	914	954	1175
	445376	63.5, 56.5, 49, 43.5	1070	1089	1129	1350
	445380	40.5, 37.5, 34, 31	1210	1229	1269	1490
	445380	27.5, 25.5, 23, 21	1390	1409	1449	1670
	445384	19.5, 17, 15, 13	1650	1669	1709	1930
60	504168	600, 572, 540, 507	690	714	760	972
	504168	475, 438, 396, 360	720	744	790	1002
	504172	323, 300, 273, 243	775	799	845	1057
	504176	225, 200, 174, 154	865	889	935	1147
	504272	145, 135, 124, 114	945	969	1015	1227
	504276	103, 93, 83, 71	1120	1144	1190	1402
	504376	63.5, 56.5, 49, 43.5	1330	1354	1400	1612
	504380	40.5, 37.5, 34, 31	1490	1514	1560	1772
	504384	27.5, 25.5, 23, 21	1700	1724	1770	1982
75	505168	600, 572, 540, 507	795	850	878	1105
	505168	475, 438, 396, 360	835	890	918	1145
	505172	323, 300, 273, 243	910	965	993	1220
	505176	225, 200, 174, 154	1030	1085	1113	1340
	505272	145, 135, 124, 114	1140	1195	1223	1450
	505276	103, 93, 83, 71	1340	1395	1423	1650
	505380	63.5, 56.5, 49, 43.5	1600	1655	1683	1910
	505384	40.5, 37.5, 34, 31	1800	1855	1883	2110
	505384	27.5, 25.5, 23, 21	2060	2115	2143	2370

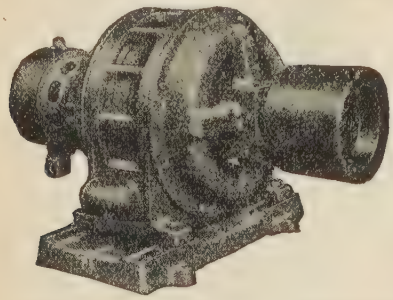
Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

All types of gear motors are suitable for operation with standard listed controllers. Where full-voltage starting is used to obtain maximum starting torque of motor, the number of starts should be limited to 4 to 6 per day.

G-E General Purpose Synchronous Motors

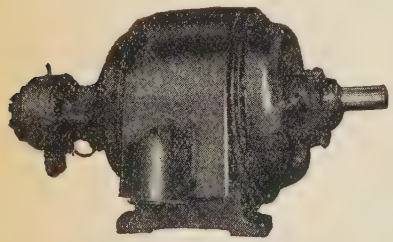
High Speed, 60 Cycles
1.0 Power-Factor—40° C. Stator and Rotor
0.8 Power-Factor—40° C. Stator, 50° C. Rotor

Type TS (3-Phase)—Type QS (2-Phase)
7500 Series—Form BL (except 1800 R.P.M.)—Skeleton Frame, Sleeve Bearings
7500 Series—Form EL (1800 R.P.M.)—Closed Box Frame (with Air Intake and Discharge Openings) Sleeve Bearings
7600 Series—Form AL, Cast Frame, Sleeve Bearings



Form BL—25 to 600 H.P., at 1200 R.P.M.

Developed to fill the need for a synchronous motor which could be recommended for most general purpose applications, in the same way that a squirrel-cage induction motor is recommended—that is, without a detailed study of the requirements of this application. For this reason, in the line of general purpose synchronous motors, there were incorporated high starting torque, overload capacity, mechanical simplicity, and reliability of G-E squirrel-cage motors.



Form EL—75 to 450 H.P. at 1800 R.P.M.

Since the exciter is direct connected and overhung on the motor end shield, the general purpose synchronous motors form complete and compact units which like the squirrel-cage induction motors, merely require connection to the a.c. power supply.

			Unity Power-Factor			0.8 Power-Factor		
H.P.	Speed R.P.M.	Volts	Frame No.	Motor Only Each	Exciter Each	Frame No.	Motor Only Each	Exciter Each
20	1200	220 440–550	....	...	...	7522	$570	$149
	1200	2200	....	...	...	7522	601	149
25	1200	220 440–550	7522	$570	$149	7526	583	149
	1200	2200	7522	601	149	7526	614	149
	900	220 440–550	....	...	...	7532	670	252
	900	2200	....	...	...	7532	711	252
30	1200	220 440–550	7526	583	149	7532	607	149
	1200	2200	7526	614	149	7532	639	149
	900	220 440–550	7532	670	252	7536	712	252
	900	2200	7532	711	252	7536	749	252
	720	220 440–550	....	...	...	7542	837	288
	720	2200	....	...	...	7542	881	288
40	1800	220 440–550	....	...	...	*....	1030	128
	1800	2200	....	...	...	*....	1085	128
	1200	220 440–550	7532	607	149	7536	638	173
	1200	2200	7532	639	149	7536	672	173

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.
*For direct connection. Not recommended for belt drive.

G-E General Purpose Synchronous Motors

High Speed, 60 Cycles
1.0 Power-Factor—40° C. Stator and Rotor
0.8 Power-Factor—40° C. Stator, 50° C. Rotor

Type TS (3-Phase)—Type QS (2-Phase)
7500 Series—Form BL (except 1800 R.P.M.)—Skeleton Frame, Sleeve Bearings
7500 Series—Form EL (1800 R.P.M.)—Closed Box Frame (with Air Intake and Discharge Openings) Sleeve Bearings
7600 Series—Form AL, Cast Frame, Sleeve Bearings
(Continued)

			Unity Power-Factor			0.8 Power-Factor		
H.P.	Speed R.P.M.	Volts	Frame No.	Motor Only Each	Exciter Each	Frame No.	Motor Only Each	Exciter Each
40	900	220 440–550	7536	$712	$252	7542	$748	$252
	900	2200	7536	749	252	7542	788	252
	720	220 440–550	7542	837	288	7546	878	323
	720	2200	7542	881	288	7546	932	323
	600	220 440–550	....	....	...	7552	1043	363
	600	2200	....	....	...	7552	1098	363
50	1800	220 440–550	*....	1030	128	*....	1067	128
	1800	2200	*....	1085	128	*....	1123	128
	1200	220 440–550	7536	638	173	7536	656	173
	1200	2200	7536	672	173	7536	691	173
	900	220 440–550	7542	748	252	7546	796	289
	900	2200	7542	788	252	7546	837	289
	720	220 440–550	7546	878	323	7552	936	323
	720	2200	7546	923	323	7552	986	323
	600	220 440–550	7552	1043	363	7556	1101	363
	600	2200	7552	1098	363	7556	1170	363
60	1800	220 440–550	*....	1067	128	*7547	1195	128
	1800	2200	*....	1123	128	*7547	1195	128
	1200	220 440–550	7536	656	173	7541	755	173
	1200	2200	7536	691	173	7541	755	173
	900	220 440–550	7546	796	289	7546	862	289
	900	2200	7546	837	289	7546	862	289
	720	220 440–550	7552	936	323	7552	1000	384
	720	2200	7552	986	323	7552	1000	384
	600	220 440–550	7552	1101	363	7556	1179	427
	600	2200	7552	1170	363	7556	1179	427
75	1800	220 440–550 2200	*7543	1195	128	*7549	1317	128
	1200	220 440–550 2200	7541	755	173	7545	876	252
	900	220 440–550 2200	7546	862	289	7552	974	289
	720	220 440–550 2200	7552	1000	323	7556	1106	384
	600	220 440–550 2200	7556	1179	427	7558	1295	427
100	1800	220 440–550 2200	*7547	1317	128	*7557	1432	128
	1200	220 440–550 2200	*7545	876	252	*7552	976	252
	900	220 440–550 2200	7552	974	289	7556	1095	329

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.
*For direct connection. Not recommended for belt drive.

G-E General Purpose Synchronous Motors

High Speed, 60 Cycles
1.0 Power-Factor—40° C. Stator and Rotor
0.8 Power-Factor—40° C. Stator, 50° C. Rotor
Type TS (3-Phase)—Type QS (2-Phase)
7500 Series—Form BL (except 1800 R.P.M.)—Skeleton Frame, Sleeve Bearings
7500 Series—Form EL (1800 R.P.M.)—Closed Box Frame (with Air Intake and Discharge Openings) Sleeve Bearings
7600 Series—Form AL, Cast Frame, Sleeve Bearings

(Continued)

			Unity Power-Factor			0.8 Power-Factor		
H.P.	Speed R.P.M.	Volts	Frame No.	Motor Only Each	Exciter Each	Frame No.	Motor Only Each	Exciter Each
100	720	220 440–550 2200	7556	$1106	$323	7558	$1210	$384
	600	220 440–550 2200	7558	1295	427	7641	1398	427
	514	220 440–550 2200	7558	1506	485	7641	1597	613
125	1800	220 440–550 2200	*7549	1432	128	*7559	1549	146
	1200	220 440–550 2200	*7552	976	252	*7556	1085	292
	900	220 440–550 2200	7556	1095	289	7556	1210	329
	720	220 440–550 2200	7558	1210	323	7632	1307	384
	600	220 440–550 2200	7558	1398	427	7641	1487	543
	514	220 440–550 2200	7641	1597	485	7651	1680	613
150	1800	220 440–550 2200	*7557	1549	128	*7559	1742	146
	1200	220 440–550 2200	*7556	1085	252	*7558	1289	292
	900	220 440–550 2200	*7556	1210	289	*7558	1416	329
	720	220 440–550 2200	7632	1307	323	7641	1537	480
	600	220 440–550 2200	7641	1487	427	7644	1700	543
	514	220 440–550 2200	7651	1680	485	7651	1863	613
200	1800	220 440–550 2200	*7559	1742	146	†....	†....	†...
	1200	220 440–550 2200	*7558	1289	252	†....	†....	†...
	900	220 440–550 2200	*7558	1416	329	†....	†....	†...
	720	220 440–550 2200	7641	1537	384	†....	†....	†...
	600	220 440–550 2200	7644	1700	427	†....	†....	†...
	514	220 440–550 2200	7651	1863	485	†....	†....	†...

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.
*For direct connection. Not recommended for belt drive.
†Prices and other information upon application.

G-E Synchronous Motor Controllers

2 or 3-Phase, 3-Wire 50 or 60 Cycles

Undervoltage Protection on Low-Voltage Panels (600 Volts Maximum)

Time-Delay Undervoltage Protection on High-Voltage Panels (Above 600 Volts)

Typical Reduced-Voltage Semi-Magnetic Controller CR7062 for High-Voltage Application (Above 600 Volts)

Available in 4 types: Full-voltage, magnetic; full-voltage, semi-magnetic; reduced-voltage, magnetic; reduced voltage, semi-magnetic. Magnetic controllers are controlled by push buttons, whereas semi-magnetic controllers are equipped with manual starting devices. Both types have automatic field application and removal equipment.

The following equipment is common to all types: A.C. line ammeter; d.c. field-ammeter; field applying contactor and field discharge contactor with discharge resistor; sequencing relays for maintaining the proper sequence in application and removal of field excitation; power-factor field-removal relay which operates on lagging power-factors to remove field excitation during the first slip-cycle out of synchronism; stator temperature overload relay and temperature squirrel-cage protective relay; drilling for exciter field rheostat.

The full-voltage magnetic controllers employ a magnetically operated contactor for connecting the motor to the line, and the semi-magnetic type is equipped with a manually-operated circuit breaker.

Reduced-voltage magnetic controllers are furnished with starting and running contactors and an auto-transformer for supplying reduced voltage to the motor in starting. The accelerating time is automatically determined by a telechron-motor-operated transfer relay, which is adjustable.

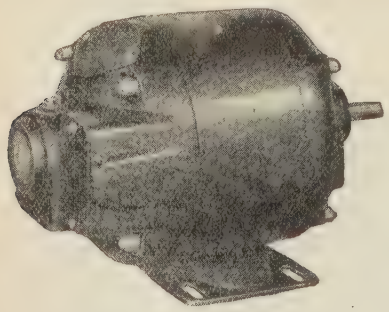
The reduced-voltage semi-magnetic controllers are similar to the magnetic type except that the starting and running devices are manually-operated.

Rating of Controller H.P.			Reduced-Voltage Controller				Full-Voltage Controllers			
			Magnetic CR7061		Semi-Magnetic CR7062		Magnetic CR7065		Semi-Magnetic CR7066	
1.0 Power-Factor	0.8 Power-Factor	Voltage Range	Each	Panel No.	Each	Panel No.	Each	Panel No.	Each	Panel No.
25	20	220	$532	111	$333	121	$303	131	...	...
		440	532	111	333	121	303	131	...	...
		550	532	111	333	121	303	131	...	...
		2200	1083	211	647	221	647	231	$730	443
30	25	220	532	111	339	121	303	131	...	...
		440	532	111	339	121	303	131	...	...
		550	532	111	332	121	303	131	...	...
		2200	1083	211	653	221	647	231	730	443
40	30	220	684	112	411	123	393	132	...	...
		440	532	111	351	121	303	131	...	...
		550	532	111	339	121	303	131	...	...
		2200	1083	211	653	221	647	231	730	443
50	40	220	684	112	417	123	393	132	...	...
		440	563	111	351	121	303	131	...	...
		550	538	111	351	121	303	131	...	...
		2200	1089	211	659	221	647	231	730	443
60	50	220	708	112	424	123	393	132	...	...
		440	563	111	357	121	303	131	...	...
		550	563	111	351	121	303	131	...	...
		2200	1101	211	659	221	647	231	730	443
75	60	220	841	114	430	123	430	134	...	...
		440	696	112	430	123	393	132	...	...
		550	563	111	357	121	303	131	...	...
		2200	1101	211	659	221	647	231	730	443

G-E Type RSA Single-Phase Constant Speed Motors

Wound Stator and Rotor, Repulsion Start, Induction Run

*110-220 Volts, 60 Cycles, Short Hour Service



A constant speed motor having high starting torque, good accelerating torque and large reserve power. Suitable for driving hard starting devices which operate only part of the time such as domestic water pumps, garage equipment, air compressors, etc. All motors are rated for continuous duty. The base has slots for belt tightening.

Drip-proof end shields, built in terminal box and large capacity wool-packed long-life sleeve bearings are incorporated. Reconnectible for 110 or 220 volts, direction of rotation easily changed.

Cat. No. Motor with Rigid Base	Motor with Solid Base Each	Frame No.	H.P. at 40° C.	Rated Full Load Speed R.P.M.	Ship. Wt., Lbs.
5RSA43C17	$15.20	43	1/6	1725	30
5RSA45C45	18.00	45	1/4	1725	34
5RSA45C50	25.65	45	1/3	1725	34

*Prices of motors for other frequencies on application.

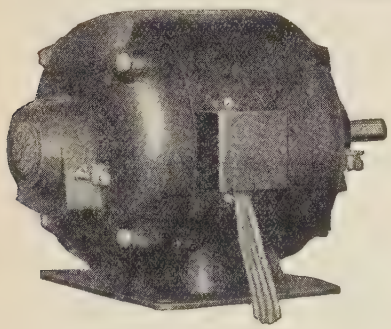
Type K polyphase and Type BC direct current motors are available with interchangeable mounting dimensions.

For larger h.p. ratings use Type SCR motors.

G-E Type SCR Single-Phase Constant Speed Motors

Repulsion-Induction, Wound Stator, Wound Rotor with Buried Squirrel Cage

*110-220 Volts, 60 Cycles, Short Hour Service



Cat. No. 5SCR75AA2

A constant speed motor having high starting torque and accelerating torque and large reserve capacity. Suitable for driving hard starting devices which operate only part of the time such as floor surfacing machines, compressors, garage and dairy equipment, hoists, etc. All motors are rated for continuous duty.

Drip-proof end shields protect the motor, large wool-packed bearing provides adequate lubrication, reconnectible for either 110 or 220 volts; rotation easily changed. Provision is made for conduit connection. A solid welded-on base is provided.

Cat. No. Motor with Rigid Base	Each	Frame No.	H.P. at 40° C.	Rated Full Load Speed R.P.M.	Ship. Wt., Lbs.
5SCR65AA4	$32.80	65	1/2	1780	68
5SCR75AA2	43.15	75	3/4	1780	80

*Prices on motors for other frequencies on application.

Type K polyphase and Type BC direct current motors are available with interchangeable mounting dimensions.

G-E Type KH Single-Phase Constant Speed Motors

Wound Stator, Squirrel Cage Rotor-Resistance, Split-Phase Starting

110-220 Volts, 60 Cycles*

Type KH-B with 45A Frame

Type KH motors have moderate starting and accelerating torque and large reserve power. Suitable for driving any easily started device requiring constant speed, such as oil burners, blowers and ironing machines. All motors are rated for continuous duty.

Base is equipped with slots for belt tightening. Drip-proof end shields, built-in terminal box, and a device to eliminate end bump are included in the 40 series frames. While these motors are considered quiet, a resilient base can be furnished on long hour service motors at slightly additional cost where more quiet operation is desired. The 1/8 and 1/4-h.p. short service motors are for devices requiring high maximum output but which operate only a small part of the time.

All motors are reconnectible for either rotation.

Long Hour Service

H.P. at 40° C.	Frame No.	Rated Full Load Speed R.P.M.	Volts	Cat. No. Motor with Solid Base	Each	Ship. Wt., Lbs.
1/40	25	1140	110	5KH25AA43	$14.95	14
			220	5KH25AA44	16.45	14
1/20	23	1725	110	5KH23AA103	12.35	12
			220	5KH23AA104	13.85	12
1/15	25	3450	110	5KH25DA47	16.30	14
			220	5KH25DA48	17.80	14
1/12	35	1140	110	5KH35CA136	17.05	20
			220	5KH35CA137	18.55	20
1/8	33	3450	110	5KH33BA41	16.80	18
			220	5KH33BA42	18.30	18
	43	1725	110	5KH43AB6	14.20	25
			220	5KH43AB7	15.70	25
	45	1140	110	5KH45AB32	17.60	29
			220	5KH45AB33	19.10	29
1/6	37	3450	110	5KH37BA237	17.05	28
			220	5KH37BA238	18.55	28
	45	1725	†110	5KH45AB16	14.45	29
			110	5KH45AB12	14.45	29
			220	5KH45AB13	14.95	29
	47	1140	110	5KH47AB14	18.10	34
			220	5KH47AB15	19.60	34
1/4	37	3450	†110	5KH37BA229	18.10	28
			220	5KH37BA230	19.60	28
	47	1725	†110	5KH47AB4	15.35	34
			220	5KH47AB7	16.85	34
1/3	49	3450	†110	5KH49BB1	22.05	40
			220	5KH49BB2	23.55	40

Short Hour Service

1/6	43	1725	†110	5KH43AB12	$9.50	25
			220	5KH43AB28	10.90	25
1/4	45	1725	†110	5KH45AB55	10.00	29
			220	5KH45AB68	11.40	29

*Prices of motors for other frequencies on application.

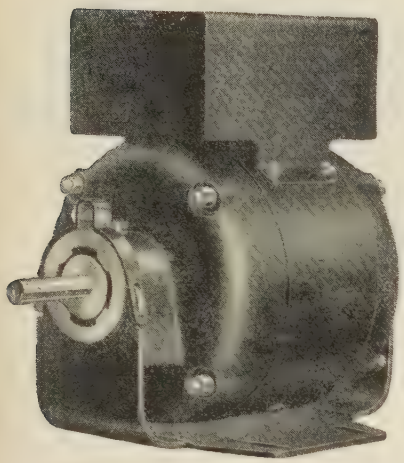
†Starting current is in excess to 20 amperes.

Type K polyphase and Type BC direct current motors are available with interchangeable mounting dimensions. All sizes are equipped with large oil capacity wool yarn packed sleeve bearings. Ball-bearing motors are available; prices on request.

G-E Type KC Single-Phase Constant Speed Motors

Wound Stator, Squirrel Cage Rotor

110-220 Volts, 60 Cycles, Long Hour Service



With 45A Frame, on End-Flange Cushion Base

Type KC motors have high starting and accelerating torque and exceptionally large overload capacity.

Suitable for driving hard starting devices where service is severe such as refrigerator compressors, stokers, etc.

All motors are rated for continuous service and will give long care-free dependable service.

Bases of all motors up to the 60 and 70 series frames have slots for belt tightening. The 40, 60 and 70 series frame motors have drip-proof end shields and a device in each end shield to eliminate end bump.

The 40 series frames have a built-in terminal box for easy lead connection; either cord and plug or conduit may be used.

All motors are equipped with large oil capacity wool-yarn-packed sleeve bearings. Rotation of 40, 60 and 70 series frame motors is easily changed.

Capacitor Start, Electrolytic

Motor Frame No.	R.P.M.	With Solid Base Cat. Nos. 110 V.	220 V.	Each	*With Resilient Base Cat. Nos. 110 V.	220 V.	Each
			⅛ H.P., No. 112 Capacitor Case				
43	1725	5KC43AB 27	5KC43AB 28	$14.80	5KC43AB 25	5KC43AB 26	$15.20
			⅙ H.P., No. 112 Capacitor Case				
45	1725	5KC45AB257	5KC45AB258	$15.20	5KC45AB254	5KC45AB256	$15.60
			⅓ H.P., No. 112 Capacitor Case				
45	1725	5KC45AB261	5KC45AB262	$15.95	5KC45AB259	5KC45AB260	$16.35
			¼ H.P., No. 112 Capacitor Case				
47	1725	5KC47AB178	5KC47AB179	$18.00	5KC47AB176	5KC47AB177	$18.40
			Capacitor Start, Permalytic				
			⅛ H.P., No. 115 Capacitor Case				
43	1725	5KC43AB 12	5KC43AB 14	$15.55	5KC43AB 29	5KC43AB 30	$15.95
			⅙ H.P., No. 125 Capacitor Case				
45	1725	5KC45AB265	5KC45AB266	$15.95	5KC45AB263	5KC45AB264	$16.35
			¼ H.P., No. 130 Capacitor Case				
47	1725	5KC47AB 7	5KC47AB 25	$18.90	5KC47AB180	5KC47AB181	$19.30
			Capacitor Start and Run				
			⅛ H.P., No. 55 Capacitor Case				
43	1725	5KC43AB 35	5KC43AB 36	$16.75	5KC43AB 33	5KC43AB 34	$17.15
45	1140	5KC45AB 71	5KC45AB 72	23.10	5KC45AB 69	5KC45AB 70	23.50
			⅙ H.P., No. 55 Capacitor Case				
37	3450	5KC37BA172	5KC37BA174	$24.00	5KC37BA168	5KC37BA170	$24.40
45	1725	5KC45AB273	5KC45AB274	17.20	5KC45AB271	5KC45AB272	17.60
47	1140	5KC47AB 45	5KC47AB 46	27.50	5KC47AB 43	5KC47AB 44	27.90
			¼ H.P., No. 55 Capacitor Case				
37	3450	5KC37BA184	5KC37BA186	$25.20	5KC37BA180	5KC37BA182	$25.60
47	1725	5KC47AB184	5KC47AB185	18.90	5KC47AB182	5KC47AB183	19.30
55	1140	5KC55CA 37	5KC55CA 38	31.90	5KC55CA 35	5KC55CA 36	33.00
			⅓ H.P., No. 55 Capacitor Case				
49	3450	5KC49BB 64	5KC49BB 65	$29.70	5KC49BB124	5KC49BB125	$30.10
53	1725	5KC53AA155	5KC53AA156	27.00	5KC53AA153	5KC53AA154	28.10
65	1140	5KC65AB 9	5KC65AB 10	38.50	.....	.....	.....
			½ H.P., No. 60 Capacitor Case				
49	3450	5KC49BB 60	5KC49BB 61	$35.75	5KC49BB122	5KC49BB123	$36.85
63	1725	5KC63AB 1	5KC63AB 2	34.50	.....	.....	.....
77	1140	5KC77AB 17	5KC77AB 18	49.50	.....	.....	.....
			¾ H.P., No. 60 Capacitor Case				
55	3450	5KC55EA 56	5KC55AE 58	$44.00	5KC55EA 52	5KC55EA 54	$45.40
73	1725	5KC73AB 3	5KC73AB 4	45.40	.....	.....	.....
			1 H.P., No. 65 Capacitor Case				
67	3450	5KC67BB 1	5KC67BB 2	$56.10	.....	.....	.....

*Frames 37 and 55 have spring-cushion base. Frames 43 to 49 have rubber-cushion base.

G-E Type K 2 and 3-Phase Constant Speed Motors

Wound Stator, Squirrel Cage Rotor

110, 220, 440, 550 Volts, 60 Cycles

Type K, with 45A Frame, with Solid Base

Type K polyphase motors have excellent starting and accelerating torque and large reserve power. They will start and drive any device operated by any of the single-phase motors of corresponding rating. As far as possible the single-phase and polyphase motors are built from interchangeable mechanical parts and have similar external appearance. Mounting interchangeability between single-phase and polyphase motors is maintained. Motors are equipped with rigid base.

H.P. at 40° C.	Frame No.	Rated Full Load Speed R.P.M.	*Cat. No. 3-Ph. Motor with Rigid Base	**Each	Approx. Ship. Wt. Lbs.
1/6	33	3450	5K33BB 3	$25.00	22
	43	1725	***§5K43AC316	22.00	26
	43	1725	†5K43AC218	22.00	26
	43	1725	‡5K43AC332	22.00	26
	45	1140	5K45AC311	23.25	30
1/4	37	3450	5K37BB134	26.50	28
	43	1725	***§5K43AC364	22.50	26
	43	1725	††5K43AC 2	22.50	26
	51	1140	5K51CB403	30.00	35
1/3	49	3450	5K49BC 2	28.00	40
	51	1725	‡5K51AB330	27.00	35
	45	1725	***§5K45AC 6	27.00	30
	63	1140	5K63AC 33	38.50	48
1/2	49	3450	5K49BC 18	34.10	40
	63	1725	5K63AC 1	32.00	48
	73	1140	5K73DC 81	45.10	56
3/4	55	3450	5K55EB 27	39.60	45
	73	1725	5K73DC 1	40.70	56
1	67	3450	5K67BC 1	44.00	60

*Cat. No. covers 3-phase 60-cycle motors; 2-phase motors are available at the same price. Prices of motors for other frequencies on application.

**These prices apply to 110-volt motors; 220-volt motors can be furnished at same prices. For 440 and 550-volt motors, add $3.00 each to above prices.

***These motors are included to provide mounting interchangeability with Type KH short hour service motors.

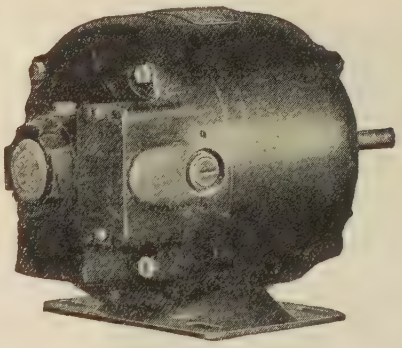
†These motors are included to provide interchangeability with Type KH long hour service motors.

‡These motors are included to provide interchangeability with Type KC motors.

§These motors are included to provide interchangeability with Type RSA motors.

G-E Type BC Direct Current Constant Speed Motors

32, 115 and 230 Volts



These motors have excellent starting and accelerating torque and large reserve power. They will start and drive any device operated by any of the single-phase motors of corresponding rating. As far as possible the design of the d.c. motors follows the general design of the single-phase motors. They have a similar external appearance and in general, the same mechanical features. Mounting interchangeability between single-phase and d.c. motors is maintained. Motors are equipped with rigid base.

Shunt Wound

H.P. at 40° C.	Frame No.	Rated Full Load Speed R.P.M.	*Cat. No. Motor with Solid Base	**Each	Ship Wt., Lbs.
1/40	28	1140	5BC28A 73	$19.00	13
1/20	28	1725	5BC28A 9	18.00	13
1/15	28	3450	5BC28A 11	21.00	13

Compound Wound

1/12	36	1140	5BC36A 16	$22.00	19
1/8	36	3450	5BC36A 18	22.00	19
	42	1725	†5BC42AB43	21.00	26
	42	1725	‡5BC42AB69	21.00	26
	42	1140	†5BC42AB41	24.00	26
	42	1140	‡5BC42AB64	24.00	26
1/6	36	3450	5BC36A 23	23.00	19
	42	1725	***§5BC42AB81	22.00	26
	42	1725	†5BC42AB 1	22.00	26
	42	1725	‡5BC42AB72	22.00	26
	44	1140	5BC44AB46	27.00	30
1/5	42	1725	5BC42AB75	24.00	26
1/4	38	3450	5BC38A 9	24.00	24
	42	1725	***§5BC42AB57	24.00	26
	44	1725	††5BC44AB 1	24.00	30
	54	1140	5BC54A 8	30.00	43
1/3	42	3450	5BC42AB87	26.00	26
	54	1725	††5BC54A 11	27.00	43
	44	1725	§5BC44AB51	27.00	30
	66	1140	5BC66AB 8	38.50	53
1/2	44	3450	5BC44AB54	33.00	30
	66	1725	5BC66AB 2	35.20	53
	74	1140	5BC74AB 4	47.30	65
3/4	54	3450	5BC54A 21	38.50	43
	74	1725	5BC74AB 1	45.10	65
1	66	3450	5BC66AB 5	49.50	53

*Cat. No. covers motors having counter clockwise rotation (when viewing end opposite shaft extension). Rotation may be changed internally. Clockwise rotation will be furnished from the factory if specified on order at no additional charge.

**These prices apply to 115-volt motors; for 32 and 230-volt motors, add $1.00 each to above prices.

***These motors are included to provide mounting interchangeability with Type KH short hour motors.

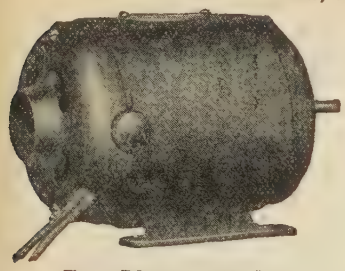
†These motors are included to provide mounting interchangeability with Type KH long hour motors.

‡These motors are included to provide interchangeability with Type KC motors.

§These motors are included to provide interchangeability with Type RSA motors.

G-E Series Wound Motors

1/100 H.P. at 5000 R.P.M. to 1/3 H.P. at 1000 R.P.M.
110 and 220 Volts, Varying Speed



Type BA with 45A Frame

A complete line of series wound motors are available for portable machines, domestic devices, etc. requiring high outputs with small size and weight. Self-aligning bearings and large oil capacity housings with oil returns provide lubrication. Only occasional oiling is required. Ventilating system cools motor even when operating under heavy loads.

Series type motors offer high starting and accelerating torque and operate at high speeds. They have varying speed characteristics, that is the speed varies with the load, but with constant load they offer constant speed. A motor must be chosen whose output closely matches the requirements of the device. The requirements of the device to be motorized are usually determined by test.

Motor parts, consisting of rotor, stator and brush mechanism are also available for built-in applications.

G-E Motors for Unusual Requirements

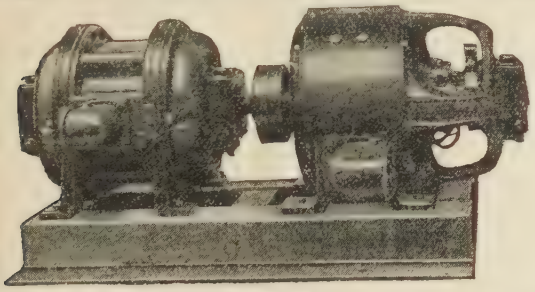
In addition to general purpose motors, G-E Fractional H.P. Motors are designed for special requirements.

The following is intended to indicate the wide scope of special service motors available: gear motors, for low speeds; explosion-proof motors, for explosive atmospheres; synchronous motors, for close speed regulation; fan duty motors, for fans and blowers; totally enclosed motors, for dusty locations; dynamotors, for converting d.c. to a.c.; motor generators, for converting power; vertical and flange-mounted motors, where special mounting arrangements are required.

Further information will be furnished on application.

G-E Induction Motor-Generator Sets

Types B or CD, D.C. Generator—Shunt or Compound Wound
3-Bearing, 40° C. Continuous Rated, 2 or 3-Phase, 60 Cycles



Made up of standard G-E motors and generators connected by solid steel couplings and mounted on welded structural steel bases. Bearings are of the self-aligning, self-feeding, oil-ring sleeve type.

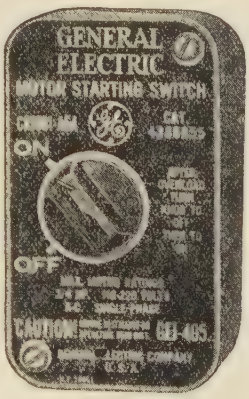
K.W. Rating of Set	Sync. Speed R.P.M.	Generator Volts	Motor Volts	Set with Gen. Field Rheo. Only Each
1	1800	125 or 250	110, 220, 440, 550	$242.00
1½	1800	125 or 250	110, 220, 440, 550	276.00
2	1800	125 or 250	110, 220, 440, 550	312.00
3	1800	125 or 250	110, 220, 440, 550	396.00
5	1800	125 or 250	220, 440, 550	486.00
7½	1800	125 or 250	220, 440, 550	587.00
10	1800	125 or 250	220, 440, 550	675.00
15	1800	125 or 250	220, 440, 550	826.00
20	1800	125 or 250	220, 440, 550	963.00
25	1800	125 or 250	220, 440, 550	1073.00
			2200	1186.00
30	1800	125	220, 440, 550	1225.00
			2200	1339.00
	1800	250	220, 440, 550	1191.00
			2200	1306.00

Prices are for motor only. Pulley and base when required will be furnished at slight additional cost.

G-E Type CR1061 Motor Starting Switches

For Fractional—H.P. Motors—Manually Operated

Maximum Ratings { A.C. { Sgl.-Pole, ¾ H.P., 110 or 220 V. / Dbl.-Pole, ½ H.P., 110 or 220 V. } / D.C. Sgl.-Pole, ⅓ H.P., 115 or 230 V. }



For Wall Mounting

The operating mechanism of these switches is of the positive snap-action type which prevents slow opening or closing of the contact tips and insures maximum contact-tip life; these tips are pure silver, of generous size. Vibration will not cause switch to trip.

Complete protection against stalled rotor current and injurious overload conditions is provided. It is impossible to hold switch closed under injurious overload conditions. After overload device has permitted the switch to trip, motor cannot be restarted until it has cooled to a safe operating temperature.

All molded parts, except the arc chute of the d.c. switches, are of G-E Textolite, and all metal parts are corrosion-resisting.

Order by CR and Cat. No. and specify one heater for overload device.

Open Type

Cat. No.	*Each	Power Supply	No. of Poles	Nomenclature
4388950	$2.05	A.C.	1	CR1061–A3B
4388954	2.35	A.C.	2	CR1061–A4B
4388952	2.05	A.C.	1	CR1061–A9A
4388953	2.35	A.C.	2	CR1061–A10A
4389054G2	2.05	D.C., 115 Volts	1	CR1061–A13B
4389054G3	2.05	D.C., 230 Volts	1	CR1061–A13B
4389055G2	2.05	D.C., 115 Volts	1	CR1061–A13C
4389055G3	2.05	D.C., 230 Volts	1	CR1061–A13C
Enclosed Type—For Wall Mounting				
4388855	$2.65	A.C.	1	CR1061–A5A
4388856	2.95	A.C.	2	CR1061–A6A
4389056G2	2.65	D.C., 115 Volts	1	CR1061–A13D
4389056G3	2.65	D.C., 230 Volts	1	CR1061–A13D
For Flush Mounting				
4388857	$2.85	A.C.	1	CR1061–A7A
4388858	3.15	A.C.	2	CR1061–A8A
4389820G2	2.85	D.C., 115 Volts	1	CR1061–A13F
4389820G3	2.85	D.C., 230 Volts	1	CR1061–A13F
For Class I Group D Hazardous Locations				
4389428	$5.70	A.C.	1	CR1061–B1A
4389204	6.00	A.C.	2	CR1061–B1C
4389435G2	5.70	D.C., 115 Volts	1	CR1061–B1E
4389435G3	5.70	D.C., 230 Volts	1	CR1061–B1E

*Price includes overload heater which must be ordered separately. Heaters may be omitted or additional ones furnished at 25 cents each.

Heaters for Type CR1061 Switches

Heaters for thermal overload devices of Type CR1061 switches should be selected from the table below, according to the full-load current of the motor.

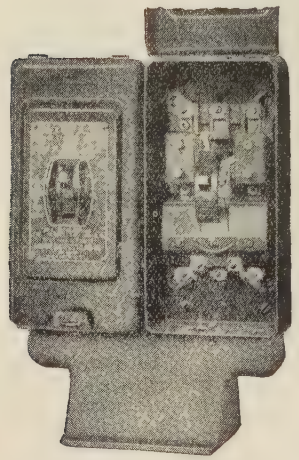
Heater Cat. No.	*Full-Load Current of Motor Amps.	Heater Current Rat. Amps.	Heater Cat. No.	*Full Load Current of Motor Amps.	Heater Current Rat. Amps.	Heater Cat. No.	*Full Load Current of Motor Amps.	Heater Current Rat. Amps.
81D160	0.47–0.52	0.58	81D170	1.62–1.82	2.00	81D180	4.64– 5.27	5.8
81D161	0.53–0.60	0.66	81D171	1.83–1.96	2.15	81D181	5.28– 6.09	6.7
81D162	0.61–0.68	0.75	81D172	1.97–2.16	2.37	81D182	6.10– 6.73	7.4
81D163	0.69–0.77	0.85	81D173	2.17–2.42	2.57	81D183	6.74– 7.82	8.6
81D164	0.78–0.88	0.97	81D174	2.43–2.64	2.90	81D184	7.83– 8.54	9.4
81D165	0.89–1.03	1.10	81D175	2.65–2.98	3.28	81D185	8.55– 9.55	10.5
81D166	1.04–1.14	1.25	81D176	2.99–3.36	3.70	81D186	9.56–10.7	11.8
81D167	1.15–1.27	1.40	81D177	3.37–3.64	4.00	81D187	10.8 –12.4	13.6
81D168	1.28–1.45	1.60	81D178	3.65–4.18	4.60	81D188	12.5 –14.0	15.4
81D169	1.46–1.61	1.77	81D179	4.19–4.63	5.10	81D189	14.1 –15.8	17.4

*Heaters must be selected only on the basis of full-load motor current.

G-E Type CR1062 Motor Starting Switches

Manually Operated—For Small A.C. Motors

25, 40, 50 and 60 Cycles



Two CR1062-C5 Switches Mounted on Pedestal Cat. No. 4923350G1

These switches are single throw with double-break contacts. Provide overload protection by means of hand-reset thermal overload device and are used for throwing small a.c. single or 3-phase, 60, 50, 40 or 25-cycle motors directly across the line. Operating mechanism trips free from handle. Contacts are of silver.

Cases have conduit knockouts and sufficient wiring space for 8 line wires with soldered terminals. Protects against single-phase operation of polyphase motors.

Order by CR and Cat. and Form No. and give rating of motor with which to be used. Specify if heaters are required for overload protection. Order pedestals by Cat. No.

Type CR1062-B6 –Single-Phase, for Wall Mounting

Switch Cat. No.	*Each	Max. H.P. Rating	Volts	No. of Poles
4981887	$6.00	1½	110	2
		2	220, 440, 550, 600	2

Type CR1062-B7—3-Phase, for Wall Mounting

4981888	$7.00	2	110, 220, 440, 550, 600	3

Type CR1062-B8—3-Phase, for Pedestal Mounting

4981889	$7.00	2	110, 220, 440, 550, 600	3

Type CR1062-C4—Single-Phase, for Wall or Pedestal Mounting

4981890	$8.00	1½	110	2
		3	220	2
		7½	440, 550, 600	2

Type CR1062-C5—3-Phase, for Wall or Pedestal Mounting

4981891	$10.00	3	110	3
		5	220	3
		7½	440, 550, 600	3

Type CR1062—Explosion-Proof

Complete information furnished on application.

*Price includes heaters. Heaters may be omitted or additional ones furnished at 50 cents each.

Heaters for G-E Type CR1062 Motor Starting Switches

For use with standard or high-reactance squirrel-cage motors. For totally-enclosed fan-cooled motors use one size smaller than listed below.

Heater Cat. No.	Full-Load Current of Motor, Amps. For CR1062B Switches	For CR1062C Switches	Heater Cat. No.	Full-Load Current of Motor, Amps. For CR1062B Switches	For CR1062C Switches
81D106	.45– .50	0.36–0.40	81D123	3.24– 3.59	2.63– 2.98
81D107	.51– .57	.41– .46	81D124	3.60– 3.99	2.99– 3.36
81D108	.58– .64	.47– .52	81D125	4.00– 4.49	3.37– 3.64
81D109	.65– .74	.53– .60	81D126	4.50– 5.09	3.65– 4.18
81D110	.75– .84	.61– .68	81D127	5.10– 5.79	4.19– 4.63
81D111	.85– .96	.69– .77	81D128	5.8 – 6.59	4.64– 5.27
81D112	.97–1.09	.78– .88	81D129	6.6 – 7.39	5.28– 6.09
81D113	1.10–1.24	.89–1.03	81D130	7.4 – 8.39	6.10– 6.73
81D114	1.25–1.39	1.04–1.14	81D131	8.4 – 9.39	6.74– 7.82
81D115	1.40–1.56	1.15–1.27	81D132	9.4 –10.4	7.83– 8.54
81D116	1.57–1.76	1.28–1.45	81D133	10.5 –11.7	8.55– 9.55
81D117	1.77–1.96	1.46–1.61	81D134	11.8 –13.4	9.56–10.7
81D118	1.96–2.16	1.62–1.82	81D135	13.5 –15.2	10.8 –12.4
81D119	2.17–2.37	1.83–1.96	81D136	15.3 –17.2	12.5 –14.0
81D120	2.38–2.59	1.97–2.16	81D137	17.3 –19.7	14.1 –15.8
81D121	2.60–2.89	2.17–2.42	81D138	.....	15.9 –18.2
81D122	2.90–3.23	2.43–2.62	.....	.....	.....

Recommended Fuse Ratings

For protecting thermal devices in CR1062 switches.

†Motor Full-Load Current Amperes	Max. Size Fuses, Amps. 250 V.	600 V.	†Motor Full-Load Current Amperes	Max. Size Fuses, Amps. 250 V.	600 V.
.36–3.36	60	30	3.65–12.4	100	60
3.37–3.64	100	30	12.5 –18.2	100	100

†Heaters Cat. Nos. 81D106 to 81D138.

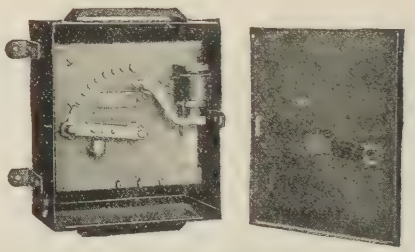
Mounting Pedestals for Types CR1062-B8 CR1062-C4 or CR1062-C5 Switches

Cat. No.	4923349G1	4923350G1
No. of Switches Accommodated	1	2
Each	$2.00	$4.00

G-E CR1026 A.C. Enclosed Starting Rheostats

For Type SCR Repulsion-Induction Motors

40, 50 and 60 Cycles, Single-Phase



These starters may be used with motors that do not require more than 150 per cent torque to start or longer than 30 seconds to attain full speed. They comply with American Standard Resistor Classification No. 35. They are primarily for use with the single-phase repulsion-induction motors (Type SCR) where the inrush of current resulting from throwing the motor directly upon the line is objectionable. When these motors are started by being thrown directly upon the line they require from 250 to 300 per cent full-load current. While in many cases this starting current may not be objectionable, it is recommended that a starter be installed in every case with the 7½ and 10 h.p. motors and with the smaller motors when it is desired to reduce the starting current.

Starters for use with motors up to and including 5 h.p. 110 volts and 7½ h.p. 220 volts are provided with button contacts. Larger sizes have renewable segments.

H.P. of Motor	110 Volts Each	220 Volts Each	H.P. of Motor	110 Volts Each	220 Volts Each	440 Volts Each
Up to 1	$21.00	$21.00	5	$25.00	$25.00	.....
1½	23.00	23.00	7½	.....	34.00	$36.00
2	23.00	23.00	10	.....	50.00	36.00
3	23.00	23.00	.....	.....	.....	.....

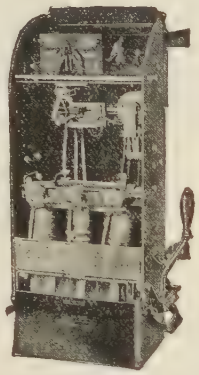
When ordering state CR No. of rheostat and h.p., voltage and frequency of motor.

G-E Type CR1034 A.C. Hand-Starting Compensators

Manually Operated—For Squirrel-Cage Induction Motors

3-Phase, 3-Wire, 60 Cycles

Type CR1034-K1 Compensator with Ammeter Attachment



Type CR1034-K1 Compensator Cover Removed Showing Type CR2824-TC-121 Relay Mounted

Suitable for starting squirrel-cage induction motors on applications requiring not more than 15 seconds to attain full speed, once every 4 minutes for an hour.

Compensators consist of an auto-transformer with suitable taps, a switching device, an instantaneous undervoltage protective device and a hand-reset overload relay, all self-contained within a sheet metal case.

Arranged for wall mounting; has conduit wiring box. The 2200-volt size is floor mounted. Switch is oil immersed. Compensators can be furnished with attachments such as ammeters, jack type disconnecting switches or motor-circuit switches.

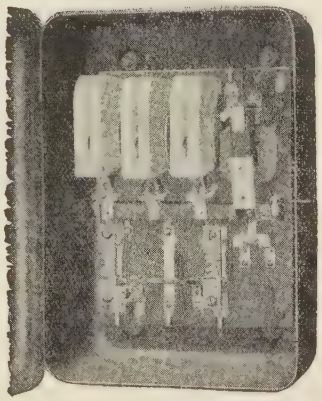
When ordering, specify a CR1034 compensator with temperature overload relay giving the complete motor rating and naming attachments wanted.

Motor Rating H.P.	Motor Rating Volts	Form	Size	Compensator and Relay Each
5 10	110, 220, 440, 550	K 1	1	$87.00
15	110, 220, 440, 550	K 1	1	87.00
20	220, 440, 550	K 1	1	90.00
20	2200	K17	.	348.00
25	220, 440, 550	K 1	1	90.00
25	2200	K17	.	361.00
30	220, 440, 550	K 1	1	94.00
30	2200	K17	.	361.00
40	220	K 1	2	160.00
40	440, 550	K 1	1	99.00
40	2200	K17	.	365.00
50	220	K 1	2	165.00
50	440, 550	K 1	1	99.00
50	2200	K17	.	365.00
60	220, 440, 550	K 1	2	171.00
60	2200	K17	.	378.00
75	220, 440, 550	K 1	2	177.00
75	2200	K17	.	378.00
100	220	K 1	3	241.00
100	440, 550	K 1	2	177.00
100	2200	K17	.	385.00
125	220	K 1	3	253.00
125	440, 550	K 1	2	192.00
125	2200	K17	.	390.00
150	220	K22	.	659.00
150	440, 550	K 1	2	192.00
150	2200	K17	.	396.00
200	440, 550	K 1	3	264.00
200	2200	K17	.	408.00

G-E Type CR7006 A.C. Magnetic Switches

For Throwing Single, 2 or 3-Phase Motors Directly on the Line

25, 50 and 60 Cycles



Type CR7006-D30B with Cover Removed

These switches consist of a 2 or 3-pole magnetically-operated contactor with overload relays mounted on a base and enclosed in a suitable case.

Provides undervoltage protection or release. May be operated by means of a push button station, float or pressure switch, etc.

Prices will be quoted on request on these switches designed specially for installation in dusty or corrosive atmospheres or in Class 1 Group D hazardous gas locations.

Order by CR No. and specify rating of motor with which to be used and heater units required for overload protection.

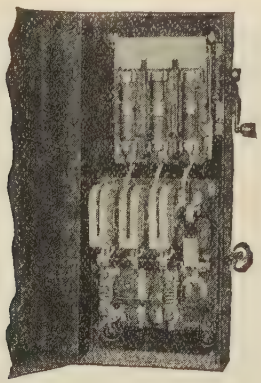
Nomenclature	*Switch Each	Omission Prices: Enclosing Case Each	Push-Button Ea.	Heater Ea.	Relay Ea.	Max. H.P. 3 or 2-Ph.	Max. H.P. 1-Ph.	Size No.	No. of Poles
110 Volts									
CR7006-D40G	$16	$1	$2	$.50	...	....	1½	1	2
CR7006-D40H	18	1	2	1.00	...	3	1½	1	3
CR7006-D30B	32	3	2	1.00	...	7½	3	2	3
CR7006-D 7B	44	7	2	1.00	...	10	7½	.	3
CR7006-D 7F	44	7	2	1.00	...	15	....	3	3
CR7006-D31B	109	14	2	1.00	...	25	....	4	3
CR7006-D38A	191	24	6	....	$36	50	....	5	3
220 Volts									
CR7006-D40G	$16	$1	$2	$.50	...	....	3	1	2
CR7006-D40H	18	1	2	1.00	...	5	3	1	3
CR7006-D30B	32	3	2	1.00	...	15	10	2	3
CR7006-D 7B	44	7	2	1.00	...	25	15	.	3
CR7006-D 7F	44	7	2	1.00	...	30	....	3	3
CR7006-D31B	109	14	2	1.00	...	50	....	4	
440 Volts									
CR7006-D40G	$16	$1	$2	$.50	...	....	7½	1	2
CR7006-D40H	18	1	2	1.00	...	7½	7½	1	3
CR7006-D30B	32	3	2	1.00	...	25	15	2	3
CR7006-D 7B	44	7	2	1.00	...	50	....	3	3
550 Volts									
CR7006-D40G	$16	$1	$2	$.50	...	....	7½	1	2
CR7006-D40H	18	1	2	1.00	...	7½	7½	1	3
CR7006-D30B	32	3	2	1.00	...	25	15	2	3
CR7006-D 7B	44	7	2	1.00	...	50	....	3	3
600 Volts									
CR7006-D40G	$16	$1	$2	$.50	...	....	7½	1	2
CR7006-D40H	18	1	2	1.00	...	7½	7½	1	3
CR7006-D30B	32	3	2	1.00	...	25	15	2	3
CR7006-D 7B	44	7	2	1.00	...	50	....	3	3

*Price includes push-button and overload relay or heaters.

G-E Type CR7008 Combination Magnetic Switches

For Throwing Single, 2 and 3-Phase Motors Directly on the Line

25, 50 and 60 Cycles



Size 2, Fusible, with Cover Removed

This switch consists of a magnetic switch (CR7006) with a quick-break manually-operated motor circuit switch. Fuses can be added and provision is made to supply a test jack if desired.

Order by CR number and specify relay heaters for overload protection; with or without fuses or test jack.

Furnished in sheet steel or dust-tight cases.

Nomenclature	*Switch Each	Add for Test Jack	†Switch in Dust-Tight Case	Max. H.P. 2 or 3-Ph.	Max. H.P. 1-Ph.	Size No.	Fuse Clip Cap. Amps.
220 Volts							
CR7008-A1B	$33.00	$7.00	$43.00	3	1½	1	30
CR7008-A1A	27.00	7.00	37.00	5	3	1	Unfused
CR7008-A1C	33.00	7.00	43.00	5	3	1	60
CR7008-A2B	53.00	7.00	65.00	10	7½	2	100
CR7008-A2A	44.00	7.00	56.00	15	10	2	Unfused
CR7008-A2C	59.00	7.00	71.00	15	10	2	200
CR7008-A3A	63.00	7.00	83.00	25	..	3	Unfused
CR7008-A3B	78.00	7.00	98.00	25	..	3	200
440 Volts							
CR7008-A1A	$27.00	$7.00	$37.00	7½	7½	1	Unfused
CR7008-A1D	33.00	7.00	43.00	7½	7½	1	30
CR7008-A2D	53.00	7.00	65.00	15	10	2	60
CR7008-A2E	53.00	7.00	65.00	25	15	2	100
CR7008-A2A	44.00	7.00	56.00	25	15	2	Unfused
CR7008-A3A	63.00	7.00	83.00	50	..	3	Unfused
CR7008-A3D	84.00	7.00	104.00	50	..	3	200
550 Volts							
CR7008-A1A	$27.00	$7.00	$37.00	7½	7½	1	Unfused
CR7008-A1D	33.00	7.00	43.00	7½	7½	1	30
CR7008-A2D	53.00	7.00	65.00	15	10	2	60
CR7008-A2E	53.00	7.00	65.00	25	15	2	100
CR7008-A2A	44.00	7.00	56.00	25	15	2	Unfused
CR7008-A3C	84.00	7.00	104.00	30	..	3	100
CR7008-A3A	63.00	7.00	83.00	50	..	3	Unfused
CR7008-A3D	84.00	7.00	104.00	50	..	3	200
600 Volts							
CR7008-A1A	$27.00	$7.00	$37.00	7½	7½	1	Unfused
CR7008-A1D	33.00	7.00	43.00	7½	7½	1	30
CR7008-A2D	53.00	7.00	65.00	15	10	2	60
CR7008-A2E	53.00	7.00	65.00	25	15	2	100
CR7008-A2A	44.00	7.00	56.00	25	15	2	Unfused
CR7008-A3C	84.00	7.00	104.00	30	..	3	100
CR7008-A3A	63.00	7.00	83.00	50	..	3	Unfused
CR7008-A3D	84.00	7.00	104.00	50	..	3	200

*Price includes push-button and heaters. The relay heaters or the push-button station may be omitted or additional ones furnished at the following prices: relay heaters, 50 cents each; push-button stations, $2.00 each.

†Price is for combination switch in cast iron case without push-button station but with relay heaters. Cast iron case cannot be furnished for combination switch with test jack. Relay heaters may be omitted at 50 cents each. If dust-tight push-button station is required, the CR2940-BS207CJ is recommended.

G-E Type CR7051 Automatic Starting Compensators

Manually Operated—For Squirrel-Cage Induction Motors

60 Cycles

Size 1 Compensator

Provides remote control for constant-speed squirrel-cage induction motors on compressors, blowers and any application that does not require longer than 15 seconds to attain full speed, once every 4 minutes for an hour. Consists chiefly of an autotransformer for supplying reduced voltage to motor during acceleration, accelerating contactor which connects autotransformer to line and motor to low-voltage taps, line contactor, temperature overload relay, a definite time relay which causes accelerating contactor to open and line contactor to close after a predetermined time.

Size No. 1—3-Phase, 3-Wire

Motor Rating H.P.	Volts	†Cat. No.	*Each	Motor Rating H.P.	Volts	†Cat. No.	*Each
5	220	4386985G3	$148.00	20	440	4386985G7	162.00
	440	4386985G4	148.00		550	4386985G8	162.00
	550	4386985G5	148.00	25	220	4386985G6	162.00
7½	220	4386985G3	148.00		440	4386985G7	162.00
	440	4386985G4	148.00		550	4386985G8	162.00
	550	4386985G5	148.00	30	220	4386985G9	168.00
10	220	4386985G3	148.00		440	4386985G10	168.00
	440	4386985G4	148.00		550	4386985G11	168.00
	550	4386985G5	148.00	40	440	4386985G12	175.00
15	220	4386985G3	148.00		550	4386985G13	175.00
	440	4386985G4	148.00	50	440	4386985G12	175.00
	550	4386985G5	148.00		550	4386985G13	175.00
20	220	4386985G6	162.00				

Size No. 1—2-Phase, 3-Wire

5	220	4386983G2	$148.00	20	440	4386983G6	162.00
	440	4386983G3	148.00		550	4386983G7	162.00
	550	4386983G4	148.00	25	220	4386983G5	162.00
7½	220	4386983G2	148.00		440	4386983G6	162.00
	440	4386983G3	148.00		550	4386983G7	162.00
	550	4386983G4	148.00	30	220	4386983G8	168.00
10	220	4386983G2	148.00		440	4386983G9	168.00
	440	4386983G3	148.00		550	4386983G10	168.00
	550	4386983G4	148.00	40	440	4386983G11	175.00
15	220	4386983G2	148.00		550	4386983G12	175.00
	440	4386983G3	148.00	50	440	4386983G11	175.00
	550	4386983G4	148.00		550	4386983G12	175.00
20	220	4386983G5	162.00				

Ammeter Attachment (Includes Ammeter).....each $55.00

*Price is for compensator, relay heater units and push-button station. Relay heater units may be omitted or additional ones supplied at 50 cents each; push-button station may be omitted or additional ones supplied at $2.00 each.

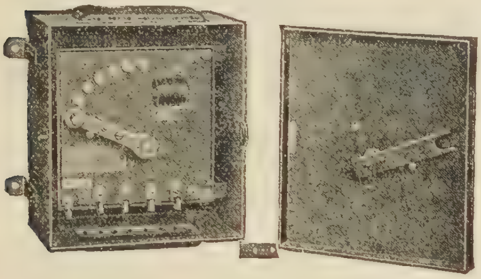
†Cat. No. does not include relay heater units.

G-E Type CR1003 D.C. Enclosed Heavy Duty Starting Rheostats

Undervoltage Protection

For Series, Shunt or Compound-Wound Motors

Amer. Std. Resistor Class. {Up to 25 H.P., No. 35 / Above 25 H.P., No. 34}



This heavy duty starting rheostat affords a convenient, simple means of providing starting and smooth acceleration for all kinds of d.c. motors.

Provides undervoltage protection.

Order by CR and Cat. No. and state rating of motor with which to be used.

Cat. No.	Each	H.P. of Motor	Approx. Ship. Wt. Lbs.	Cat No.	Each	H.P. of Motor	Approx. Ship. Wt. Lbs.
32 Volts							
2021100G15	$11	¼	20	2021000G31	$17	1½–2	40
2021100G17	11	½	20	2042441G7	36	3	120
2021000G29	17	¾–1	40	2042441G8	40	5	120
115 Volts							
2021100G3	$11	⅛–½	20	2042593G3	$54	25	175
2021100G7	11	¾–1	20	2042593G4	56	30	175
2021000G3	17	1½–2	40	2042593G6	56	35	175
2021000G7	17	3	40	2091686G2	183	40	400
2021000G11	21	5	50	2091687G2	237	50	550
2042440G2	35	7½	80	2091687G3	237	55	550
2042441G2	44	10	90	2091687G4	244	60	550
2042441G3	44	15	90	2091687G5	244	75	550
2042593G2	54	20	175	....	...	...	...
230 Volts							
2021100G5	$11	⅛–½	20	2042593G7	$57	35	175
2021100G9	11	¾–1	20	2042593G8	57	40	175
2021000G5	17	1½–2	40	2042593G9	57	50	175
2021000G9	17	3	50	2091686G3	190	55	400
2021000G13	21	5	50	2091686G4	190	60	400
2021000G15	22	7½	50	2091686G5	190	75	400
2042440G3	39	10	105	2091686G6	190	85	400
2042441G4	47	15	105	2091687G6	244	100	550
2042441G5	47	20	105	2091687G7	244	125	550
2042441G6	47	25	105	2091687G8	244	150	550
2042593G5	57	30	175	....	...	...	...
440 Volts							
2046400G3	$21	⅛–½	45	2091688G4	$142	35	350
2046400G5	21	¾–1	45	2091688G5	142	40	350
2046400G7	21	1½–2	45	2091689G2	150	50	350
2046400G9	21	3	50	2091689G3	150	55	350
2046400G11	22	5	50	2091690G2	183	60	400
2046400G13	27	7½	50	2091690G3	183	75	400
2046828G2	69	10	80	2091691G2	204	85	400
2046828G4	71	15	80	2091691G3	204	100	400
2046828G6	76	20	90	2091691G4	211	125	400
2091688G2	142	25	350	2091691G5	211	150	400
2091688G3	142	30	350	....	...	...	...
550 Volts							
2046402G3	$21	⅛–½	45	2091688G8	$124	35	350
2046402G5	21	¾–1	45	2091688G9	124	40	350
2046402G7	21	1½–2	45	2091689G4	156	50	350
2046402G9	21	3	50	2091689G5	156	55	350
2046402G11	22	5	50	2091690G4	190	60	400
2046402G13	27	7½	50	2091690G5	190	75	400
2046828G3	69	10	80	2091690G6	190	85	400
2046828G5	71	15	80	2091690G7	190	100	400
2046828G7	76	20	80	2091691G6	204	125	400
2091688G6	150	25	350	2091691G7	204	150	400
2091688G7	150	30	350	....	...	...	...

G-E Type CR4065 Definite-Time Limit Automatic Starters

For Shunt or Compound-Wound, D.C. Motors

Type CR4065-A8, 3-Point Starter

These starters provide definite time limit acceleration, provide thermal overload protection as well as undervoltage release or protection. The mechanism consists of a solenoid operated, multi-fingered contactor which, with the overload relay, is mounted on a compound base. The starting resistor is mounted on the back of the base and the whole is assembled in a ventilated sheetsteel case.

Order by CR No., give complete rating of motor and specify heater units required for overload protection.

Type CR4065-A8 (Enclosed)

H.P. of Motor	115 Volts Cat. No.	Each	Ship. Wt. Lbs.	230 Volts Cat. No.	Each	Ship. Wt. Lbs.
¾–1½	3883843G4	*$41.00	15	3883843G2	*$41.00	15
2 –3	3883843G5	* 41.00	15	3883843G3	* 41.00	15

Type CR4065-A2 (Enclosed)

H.P. of Motor	115 Volts Cat. No.	Each	Ship. Wt. Lbs.	230 Volts Cat. No.	Each	Ship. Wt. Lbs.
5 –7½	3650396G2	*$64.00	30	3650393G2	*$47.00	25
10	3650396G3	* 70.00	30	3650396G5	* 64.00	30
15–20	....	.....	..	3650396G6	* 70.00	30

Type CR4065-C1 (Enclosed)

H.P. of Motor	115 Volts Cat. No.	Each	Ship. Wt. Lbs.	230 Volts Cat. No.	Each	Ship. Wt. Lbs.
15	....	*$225.00	210	....	....	...
20	....	†229.00	210	....	....	...
25	....	‡358.00	490	3885463G2	*$206.00	210
30	....	‡364.00	490	3885463G3	*212.00	210
35	....	‡370.00	490	3885463G4	*217.00	210
40	....	‡482.00	700	3885463G5	*223.00	210
50	....	‡517.00	710	3885464G2	‡375.00	495
60	....	‡523.00	710	3885464G3	‡381.00	495
75	....	‡529.00	710	3885464G4	‡387.00	495
85	....	....	...	3885465G2	‡505.00	710
100	....	....	...	3885465G3	‡517.00	710
125	....	....	...	3885465G4	‡523.00	710
150	....	....	...	3885465G5	‡529.00	710

Type CR4065-C2 (Open)

H.P. of Motor	115 Volts Cat. No.	Each	Ship. Wt. Lbs.	230 Volts Cat. No.	Each	Ship. Wt. Lbs.
15	....	*$212.00	145	....	....	...
20	....	†206.00	145	....	....	...
25	....	‡264.00	340	3885463G12	†$186.00	145
30	....	‡270.00	340	3885463G13	†194.00	145
35	....	‡276.00	340	3885463G14	†200.00	145
40	....	‡393.00	540	3885463G15	†206.00	145
50	....	‡422.00	550	3885464G12	‡282.00	350
60	....	‡428.00	550	3885464G13	‡288.00	350
75	....	‡434.00	550	3885464G14	‡294.00	350
85	....	....	...	3885465G12	‡405.00	550
100	....	....	...	3885465G13	‡416.00	550
125	....	....	...	3885465G14	‡422.00	550
150	....	....	...	3885465G15	‡428.00	550

*Price includes starter with relay heater and push-button station CR2940-BS-79-J, which may be omitted or additional ones furnished at the following prices: relay heater, 50 cents each; push-button station, $2.00 each.

†Price includes starter with relay heater and push-button station CR2940-2A1, which may be omitted or additional ones furnished at the following prices: relay heater, 50 cents each; push-button station, $6.00 each.

‡Price includes starter with CR2940-2A1 push-button station, which may be omitted or additional ones furnished at a price of $6.00 each.

G-E Type CR2927 Pressure and Vacuum Switches

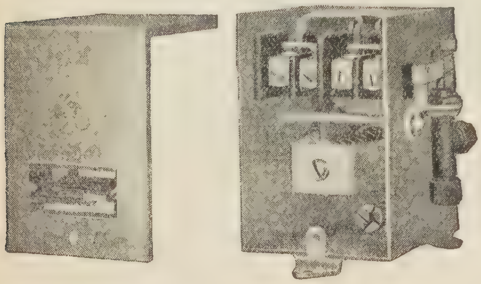
Diaphragm Type—For Starting Small Motors or for Pilot-Circuit Control

Maximum H.P. Ratings:

2 H.P. 110 Volts, 5 H.P. 220 Volts, 3 H.P. 440 and 550 Volts A.C. Polyphase

1½ H.P. 110 Volts and 3 H.P. 220 Volts A.C. Single-Phase

1 H.P. 110 Volts, 2 H.P. 220 Volts and ¾ H.P. 440 and 550 Volts D.C.



Pressure Switch (Cover Removed) with Unloader Valve and Differential-Adjusting Attachment Mounted in Place

These switches are designed to open or close contacts upon changes of pressure or vacuum of any gas or liquid which will not affect rubber or steel parts.

Used for starting motors not larger than 2 h.p. 110 volts, 5 h.p. 220 volts and 3 h.p. 440 and 550 volts polyphase; 1½ h.p. 110 volts and 3 h.p. 220 volts single-phase or 1 h.p. 110 volts, 2 h.p. 220 volts and ¾ h.p. 440 and 550 volts d.c. When larger motors are used, these switches can be used in connection with automatic starters which will also provide overload protection. This protection can also be secured by ordering one CR1920 which consists of 2 thermal cutouts mounted in a sheet steel enclosing case at $5.00 each.

Order by CR No. and specify adjustment if other than factory adjustment is required.

Pressure Switches

Cat. No.	Each	* Operation	Max. Pressure in Lbs. per Sq. In.	Factory Adjustment in Lbs. per Sq. In. Close	Factory Adjustment Open	Min. Adjustment in Lbs. per Sq. In. Close	Min. Adjustment Open	Max. Adjustment in Lbs. per Sq. In. Close	Max. Adjustment Open
2248268G7	$15	Std.	5000	3200	4500	250	1300	3650	5000
2248268G2	7	Std.	300	200	250	15	35	245	300
2248268G3	6	Std.	160	130	150	8	23	140	160
2248268G4	14	Std.	80	70	80	4	12	70	80
2248268G20	5	Std.	80	52	70	8	23	62	80
2248268G5	14	Std.	40	36	40	2	5	36	40
2248268G6	16	Std.	13	9	10	½	1¼	12	13
2248268G8	7	Rev.	300	250	230	35	5	300	245
2248268G9	6	Rev.	160	150	130	23	8	160	140
2248268G10	14	Rev.	80	80	70	12	4	80	70
2248268G11	14	Rev.	40	40	36	5	2	40	36
2248268G12	16	Rev.	13	10	9	1¼	½	13	12

Vacuum Switches

Cat. No.	Each	* Operation	Max. Vacuum in Inches of Mercury	Factory Adjustment in Inches of Mercury Close	Factory Adjustment Open	Min. Adjustment in Inches of Mercury Close	Min. Adjustment Open	Max. Adjustment in Inches of Mercury Close	Max. Adjustment Open
2248269G2	$13	Std.	26½	5⅔	8	1	3	23½	26½
2248269G3	13	Rev.	26½	8	5⅔	3	1	26½	23½

*Std.—standard operation—open at high pressure, close at low pressure. Rev.—reverse operation—open at low pressure, close at high pressure.

Attachments

Cat. No. **2244498G2**, Unloader, 2-Way............each **$1.50**
Cat. No. **2246093G1**, Differential-Adjusting Attachment............each **1.00**
Cat. No. **2246094G1**, Hand-Operated Lock-Out Lever............each **1.50**

G-E Type CR2931 Enclosed Float Switches

For A.C. or D.C. Motors

Form D

Form P

Suitable for use in the control circuit of a.c. or d.c. automatic starters, and, except for the Form P, can directly handle the circuits of small motors.

These switches, as furnished, are arranged for tank operation, that is, the switch closes as the lower liquid level is reached, and opens as the top level is reached. This action may be easily changed for sump operation by interchanging the float and counterweight. Standard floats should not be subjected to pressure. Quotation on special floats will be furnished on request.

All switches are drip and splash-proof and suitable for outdoor installation where they are not subjected to snow or sleet. Where the liquid whose level is to be controlled is subject to freezing, a float switch should not be used.

All switches are quick acting when closing and opening, and this insures a minimum of arcing and burning of the contacts.

Form	No. of Poles	Description	Each
A	Dbl.	For Clamping to Inside Top Edge of Tank; Operated by Rod and Float; Range, 10 Inches to 2 Feet	**$39**
A	4	Same as Form A Double-Pole	**44**
B	Dbl.	For Bolting to Tank Cover; Requires Guide in Cover for Operating Rod; Range, 10 Inches to 3½ Feet	**44**
B	4	Same as Form B Double-Pole	**48**
C	Dbl.	For Bolting to Tank Cover; Range, 10 Inches to 3½ Feet	**41**
C	4	Same as Form C Double-Pole	**46**
D	Dbl.	‡For Bolting to Tank Cover; Operated by Chain and Float; Suitable for Any Depth of Tank or Any Variation in Water Level Not Less Than 10 Inches	***44**
D	4	‡Same as Form D Double-Pole	***48**
L	Dbl.	‡Operated by Chain and Float; For Any Variation in Water Level Not Less Than 5″	***25**
M	Dbl.	Rod-Operated; Range, 2½ In. to 4½ Ft.	**25**
P	Sgl.	§Operated by Chain and Float; For Any Variation i Water Level Not Less Than 2″	**†13**
U	Sgl.	Same as Form P, Except with Mercury-Tube, Heavy Duty Connectors	**†15**

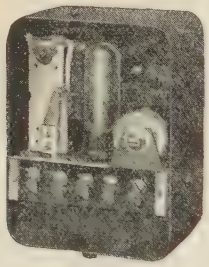
Order by CR and Form numbers. Specify number poles of switch.

*Price includes 15 feet of bronze chain. If more is required add 15 cents for each additional foot.

†Price includes 15 feet of brass chain. If more is required add 5 cents for each additional foot.

To obtain maximum operating range: ‡Deduct 3½ feet from length of chain; §deduct 1½ feet from length of chain.

G-E Type CR7505 Photoelectric Relays



Type CR7505-K1, with Cover Removed

These devices consist generally of a phototube, a relay, an amplifying tube and associated apparatus mounted on a base and within an enclosing case. Their purpose is to control an electric circuit in response to an increase or decrease in the amount of light falling on the phototube.

Form K1 is applicable to installations where at least 50% changes of light variation are obtainable and will control only small currents (1 ampere at 110 volts, non-inductive load).

Form A5 operates on 40% change in light and includes a contactor which will make or break a circuit of 15 amperes at 110 or 220 volts a.c., 10 amperes at 125 volts d.c. and 5 amperes at 250 volts d.c. (non-inductive load). Its features are in general similar to the K1.

Features

Responds to the interception or application of light.

Operates without offering resistance to the actuating object and without impairing the accuracy of delicate mechanisms.

Will operate from light flashes or interruptions of not less than 1/15-second duration, with not less than 1/15-second between impulses. With these conditions, a maximum speed of 450 operations per minute can be obtained. For such high speeds of operation in counting applications, it is recommended that a .5-mfd. capacitor be used across the counter-coil.

Easily mounted by means of two screws through holes in back of enclosing case or directly on vertical rigid conduit.

Unit can be taken from case by removing two screws.

Sensitivity can be adjusted with a screwdriver through opening in front cover.

All terminals easily accessible from front of unit by removing cover.

The relay may be mounted in any position, provided vibration will not loosen the tubes in the sockets. Where excessive vibration is present, relay should not be mounted at more than 45 degrees from the vertical.

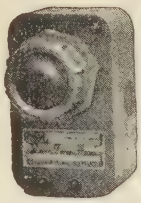
A domestic Mazda lamp, with or without reflecting shield, may be used for a light source. For applications where a higher light intensity is required or where it is necessary to mount the unit a considerable distance from the light source, standard light sources are available.

The phototube window should be shielded from extraneous light when the unit is to operate at a considerable distance from the light source.

Order by Cat. No.

Cat. No.	Including Tubes Each	Type	Volts	Cycles	Approx. Ship. Wt. Lbs.
4389209G2	$35.00	CR7505-K1	110–120	60, 50	5
4981669G2	87.00	CR7505-A5	110–120	60, 50	35
4981669G4	87.00	CR7505-A5	110–120	25	35
4981669G3	87.00	CR7505-A5	220	60, 50	35
4981669G5	87.00	CR7505-A5	220	25	35

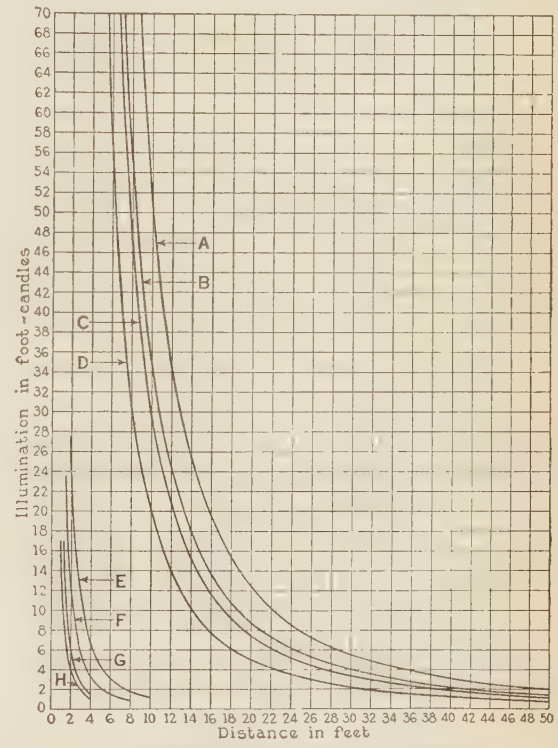
G-E Type CR7500 Light Sources



No. CR7500-A3

By referring to the chart shown below, the illumination obtained from various light sources at definite distances can be readily determined. For example: the CR7505-K1 relay with a standard cover requires a minimum illumination of 5 foot-candles. The curves (see illustration below) show that 5 foot-candles can be obtained at a distance of 30 feet from the CR7500-A3 light source. Therefore, CR7500-A3 light source with a 21-candlepower lamp will operate the CR7505-K1 photoelectric relay over a distance of 30 feet, assuming a clear atmosphere between the two units.

Order by CR number with or without transformer. Unless a 6-volt supply is available transformer must be included.



Illumination Intensities of Various Types of Light Sources

When light beam must pass through a dusty atmosphere or through material which absorbs some light (such as glass or water), the value of illumination taken from the curves, should be decreased by a factor which is a conservative estimate of the per cent absorption of the atmosphere or material. When light beam must be reflected by some surface to reach the phototube, the value of illumination taken from the curves, must be multiplied by the reflection coefficient of the surface to obtain a proper estimate of the illumination available at the phototube.

It is sometimes desirable to have the light beam reach the phototube through an aperture smaller than the opening provided in the phototube housing. In such cases, the illumination necessary is increased in the same proportion that the area of the aperture is decreased.

Cat. No.	†Each	Installation	Form	Volts	Cycles	Ship. Wt. Lbs.
4981750	*$11.00	Indoor	A4	110–220	50–60	6
4980621	* 19.00	Indoor	G1A	110–220	50–60	6
4980654G2	25.00	Outdoor	B2	110–220	50–60	12

*The transformer, which mounts in a box, may be omitted at a price of $6.00. †Price includes transformer but no lamp.

If a 110–220-volt, 25-cycle transformer is required for indoor type of light source, add $8.00 to price of light source alone. A 25-cycle transformer cannot be mounted in outdoor type of light source because the physical dimensions of transformer are too great.

An infra-red filter may be provided with CR7500-G1A light source at a price of $4.00.

G-E Type CR9006 Enameled Resistor Units

Form QD

FORM QL.—Has stranded copper leads for making external connections.

FORM QD.—Has stranded copper leads and porcelain bushings to facilitate mounting.

FORM QC.—Designed for fuse clip mounting. Leads are connected to metal ferrules.

FORM QS.—Provided with screw base for mounting in lamp sockets. The ¾-inch size has a candelabra base and the 1⅛-inch size has a standard Edison base.

FORM QF.—Provided with metal feet to which leads are connected and through which external connections are made.

Form	Size	Ohms	Each	Form	Size	Ohms	Each
			*22-Watt Units				
QL	K1924025	1– 800	$ 50	QF	K2155965	801– 3000	$.75
QL	K1924025	801– 3000	.55	†QS	K1924034	1– 800	.80
QF	K2155965	1– 800	.65	†QS	K1924034	801– 3000	.85
			*57-Watt Units				
QL	K1924029	1– 225	$.55	QC	K2155968	226–10000	$1.05
QL	K1924029	226–10000	.60	QF	K1924030	1– 225	.85
QC	K2155968	1– 225	.95	QF	K1924030	226–10000	.90
			*85-Watt Units				
QL	K1924012	1– 4000	$.65	QC	K1924014	4001–15000	$1.05
QL	K1924012	4001–10000	.75	QF	K2155983	1– 4000	.95
QD	K1924013	1– 4000	.80	QF	K2155983	4001–15000	1.05
QD	K1924013	4001–15000	.85	‡QS	K1924049	1– 4000	1.10
QC	K1924014	1– 4000	.95	‡QS	K1924049	4001–15000	1.15
			*122-Watt Units				
QL	K1924015	1– 6000	$.80	QF	K1924019	1– 6000	$1.10
QL	K1924015	6001–23000	.85	QF	K1924019	6001–23000	1.15
QD	K1924016	1– 6000	.90	QF	K1924020	1– 6000	1.10
QD	K1924016	6001–23000	.95	QF	K1924020	6001–23000	1.15
QC	K1924017	1– 6000	1.10	‡QS	K1924050	1– 6000	1.15
QC	K1924017	6001–23000	1.15	‡QS	K1924050	6001–23000	1.20
**QE	K1924021	1–23000	1.40	.....	.....	.....	.....
			*180-Watt Units				
QL	K2155954	1–12000	$.90	QC	K2673042	12001–34000	$1.35
QL	K2155954	12001–34000	1.05	QF	K2673017	1–12000	1.20
QC	K2673042	1–12000	1.20	QF	K2673017	12001–34000	1.35

*This rating is based on a single unit mounted with free ventilation. The rating is reduced if ventilation is hindered by adjacent units or by enclosure.

**Used in CR9158 enclosure. Enclosed rating, 85 watts.

†Has candelabra base. ‡Has Edison screw base.

Ratings

§Std. Resistance Values in Ohms	22-Watt Unit	57-Watt Unit	85-Watt Unit	122-Watt Unit	180-Watt Unit	§Std. Resistance Values in Ohms	22-Watt Unit	57-Watt Unit	85-Watt Unit	122-Watt Unit	180-Watt Unit
		MAXIMUM AMPERES						MAXIMUM AMPERES			
1	4.5	...	...	...	...	400	.22	.37	.45	.55	.67
3	2.6	4.3	5.1	..	..	500	.20	.33	.40	.49	.60
5	2.0	3.3	4.0	4.9	6.0	600	.18	.30	.36	.45	.55
10	1.4	2.3	2.7	3.5	4.3	700	.17	.28	.34	.41	.50
15	1.1	1.9	2.3	2.8	3.4	800	.16	.26	.32	.39	.47
20	1.0	1.6	2.0	2.4	3.0	900	..	.25	.30	.37	.45
25	0.9	1.5	1.8	2.2	2.7	1000	..	.23	.28	.35	.43
30	0.8	1.3	1.6	2.0	2.4	1200	..	.21	.26	.32	.39
40	0.71	1.1	1.4	1.8	2.0	1400	..	.20	.24	.29	.35
50	0.63	1.05	1.2	1.5	1.9	1600	..	.185	.22	.27	.33
60	0.58	0.96	1.1	1.4	1.7	1800	..	.175	.21	.26	.32
75	0.52	0.86	1.0	1.3	1.6	2000	..	.16	.20	.24	.30
100	0.45	0.74	0.90	1.1	1.3	2500	..	.15	.18	.22	.25
125	0.40	0.66	0.80	1.0	1.2	3000	..	.13	.16	.20	.24
150	0.36	0.60	0.73	0.90	1.1	4000	..	..	.14	.17	.20
175	0.34	0.56	0.67	0.83	1.0	5000	..	..	..	.15	.19
200	0.31	0.52	0.63	0.77	0.95	6000	..	..	..	..	.17
250	0.28	0.47	0.56	0.69	0.84	8000	..	..	..	..	.14
300	0.26	0.43	0.51	0.63	0.72	10000	..	..	..	..	.13

§Resistance of standard units varies from 95 to 110 per cent of these values. Prices for units of less resistance variation will be quoted on request.

Intermediate taps can be furnished at an additional price of 15 cents each.

Cat. No. **2X930**, Fuse Clips for 57-Watt Form QC..each **$.12**

Cat. No. **2X931**, Fuse Clips for 85, 122 and 180-Watt, Form QC Units.....each **.12**

Two fuse clips are required for each unit.

G-E Type CR9504 Thrustors

To Provide Smooth Straight-Line Thrust From Electric Motor Drive

This is a self-contained hydraulic device which exerts a smooth, straight-line thrust (50 to 3200 pound maximum thrust) in one direction throughout a definite distance (2 and 16-inch maximum stroke). The return stroke is effected by gravity or a spring.

The device can repeat this cycle of operation indefinitely at a rate of 10 to 30 times per minute depending on the size of unit. It is driven by a built-in fractional h.p. motor and therefore the power consumption is small.

The CR9504 Thrustor performs services similar to those accomplished by air cylinders and large a.c. and d.c. magnets and solenoids.

Order by CR and Form No. giving voltage, frequency and phase.

Volts	Phase	Cycle	Price †Each	*Running Current Amps.
			CR9504-L—50 Pounds Maximum—2-Inch Stroke	
110	3	60	$85.00	.92
220	3	60	85.00	.43
440	3	60	85.00	.23
†110	1	60	75.00	1.8
†220	1	60	75.00	.9
			CR9504-V—100 Pounds Maximum—2-Inch Stroke	
110	3	60	$140.00	.74
220	3	60	140.00	.37
440	3	60	140.00	.18
			CR9504-N—200 Pounds Maximum—4-Inch Stroke	
110	3	60	$190.00	1.76
220	3	60	190.00	.88
440	3	60	190.00	.44
550	3	60	190.00	.35
110	1	60	210.00	3.0
220	1	60	210.00	1.5
			CR9504-T—400 Pounds Maximum—4-Inch Stroke	
110	3	60	$225.00	1.88
220	3	60	225.00	.94
440	3	60	225.00	.47
550	3	60	225.00	.38
110	1	60	240.00	3.8
220	1	60	240.00	1.9
			CR9504-M—600 Pounds Maximum—6-Inch Stroke	
110	3	60	$250.00	2.8
220	3	60	250.00	1.4
440	3	60	250.00	.7
550	3	60	250.00	.56
110	1	60	265.00	5.0
220	1	60	265.00	2.5

*Inrush current for a.c. motors is approximately 5 times running current.

†Use these thrustors for 50-pound d.c. application also.

G-E Type CR9507 Solenoid-Operated Valves

Cover Open to Show Operating Mechanism

Features

Operating coils are designed for continuous duty.

Valves are of the unbalanced type and require little power for operation.

Valve seats can be ground without removing valve from the line.

Rotary-gland design results in much less wear and friction than are usual with the reciprocating type.

Solenoids have more power than required to operate valves. The operating mechanism is so designed that the solenoid plunger accelerates without load for a fraction of the stroke, thus effecting quick and reliable operation.

Minimum number of wearing parts.

Valve seats are wide and designed to provide long life and dependable operation.

Solenoids and operating mechanisms are supported from the main sections of the valve-body castings. This strong construction removes all strains from the valve seat and operating members.

Solenoids and operating mechanisms are enclosed in sheet-metal cases with knockouts suitable for conduit connection.

A Few Suggested Uses of CR9507 Solenoid-Operated Valves

For operating steam or air whistles.

For controlling the flow of brine through cooling pipes in cold storage rooms.

For remotely or automatically controlling the supply of oil or gas to furnaces.

For automatically controlling the flow of liquids in connection with weighing machines.

For controlling the flow of water in cooling jackets on compressors.

Type CR9507 solenoid-operated valves can be supplied for a wide variety of general-purpose applications. Some of their more common uses may be classified as follows:

A—Steam, water, natural gas, air, oil, formaldehyde.

B—Ammonia gas, artificial gas, air, oil, sodium-chloride brine.

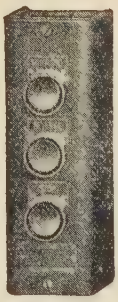
C—Chlorine gas.

D—Steam, natural gas, air.

Construction According to Classification

Classification	Body	Trimmings	Max. Press. per Sq. In.	Max. Temp. Deg F.
A	Bronze	Bronze Valve Seat and Poppet	125	385
B	Cast Iron	Cast Iron Valve Seat and Poppet	200	385
C	Monel Metal	Monel Metal Valve Seat and Poppet	200	385
D	Cast Steel	Stainless Steel Seat and Poppet	250	700

G-E Type CR2940 Push Button Stations



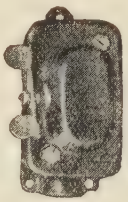
Typical 3 Button Station for Front-of-Panel or Wall Mounting

The CR2940 push button stations are primarily intended for use in the control circuits of various magnetic controllers. The large contacts and substantial construction of these heavy-duty stations make them well able to withstand the frequent operation and ordinary rough usage of machine-tool and similar applications.

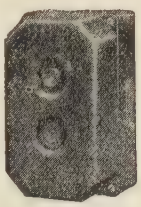
The stations listed are divided into three general classes: momentary contact, maintaining contact and a combination of momentary and maintaining contacts. With a momentary contact the circuit is completed or interrupted only as long as the operator's finger depresses the button. This feature is required when the station is used with a controller that must provide under-voltage protection. A maintaining contact holds the circuit open or closed as does an ordinary knife switch.

No. BS-11-AW

No. BS-79-J



No. BS-207-CJ



No. BS-82-A

General Purpose

Momentary Contact

Single Button

Nomenclature	Nameplate Markings	Each
CR2940-1A1	Stop	$4.00
CR2940-1D1	Jog	4.00
CR2940-1H1	Start	4.00
CR2940-1K1	Forward	4.00
CR2940-1L1	Reverse	4.00
CR2940-BS11AW	No Marking (Foot-Operated)	5.00

2 Buttons

CR2940-2A1	Start—Stop	$6.00
CR2940-2E1	Raise—Lower	6.00
CR2940-2F1	Up—Down	6.00
CR2940 2G1	Fast—Slow	6.00
CR2940-BS79J	Start-Stop	2.00

3 Buttons

CR2940-3A1	Forward—Reverse—Stop	$8.00
CR2940-3C1	Start—Slow—Stop	8.00
CR2940-3D1	Open—Close—Stop	8.00

4 Buttons

CR2940-4A1	Forward—Jog Forward—Reverse—Stop	$12.00

5 Buttons

CR2940-5A1	Forward—Jog Forward—Reverse—Jog Reverse—Stop	$14.00

Maintaining Contact

One Selector Switch

CR2940-A2	Safe Stop—Run	$5.00
CR2940-B2	Stop—Run	5.00
CR2940-C2	Slow—Fast	5.00
CR2940-D2	Creep—Normal	5.00
CR2940-E2	Open—Close	5.00
CR2940-F2	On—Off	5.00
CR2940-G2	Stop—Start	5.00
CR2940-H2	Raise—Lower	5.00

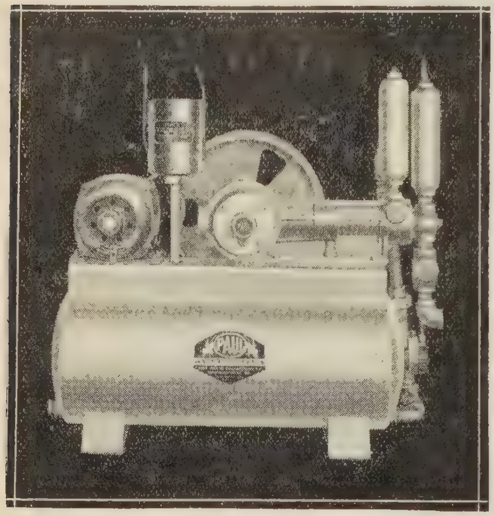
Stations for Special Applications

CR2940-BS207CJ	Start—Stop (Water-Tight)	$8.00
CR2940-BS207GK	Start—Stop (Dust-Tight)	5.00
CR2940-BS82A	Start—Stop (Time Delay Under-voltage)	15.00

Paul Green Knight Water Systems

250 Gallons per Hour
Self-Priming

A Complete Automatic System with Storage Tank



The Paul Green Knight Water System is especially designed for supplying the water requirements of the average home, either for soft water or for complete water service, where the water level of the source of supply is not more than 22 feet below the pump.

It is a completely automatic water system, consisting of a Paul Type K Pump, 10-gallon galvanized pressure tank, Paul Type G Automatic Pressure Controller, and all fittings including relief valve and automatic air volume control, all assembled into a sturdy compact unit.

The pump uses only two valves, a bronze poppet type suction valve and a live soft rubber discharge valve. This permits a greatly simplified construction and fewer moving parts—yet a more positive and efficient action.

Standard Equipment

Paul Type K Self-Priming Suction Pump, belt-driven.

Standard constant duty a.c. or d.c. motor, mounted on pump base. The a.c. motors are of the repulsion induction type.

Electric welded tank, heavily galvanized inside and out, guaranteed for a working pressure of 75 pounds.

V-belt drive, operating on V-motor pulley and flat face belt wheel.

Fixtures include automatic air volume control, which automatically maintains proper water level and volume of air; Paul Relief Valve for protection against excessive pressure; and all pipe and fittings connecting pump and tank.

The Type G Improved Pressure Controller, double-pole, diaphragm operated, starts pump at 20 pounds; stops at 40 pounds.

Pump, tank and pipe are finished in jade green lacquer. The motor is black enamel. Fittings are gold and nickel trimmed.

Model No.	*Each	Tank Cap. Gal.	Pipe Size In. Suction	Pipe Size In. Service	Ht. In.	Wdth. In.	Lgth. In.	Ship. Wt. Lbs.
193	**$65.00**	†	¾	¾	20	12	32	120
1932	**75.00**	10	¾	¾	29	14	32	130
1933	**87.50**	25	¾	¾	29	16	32	140

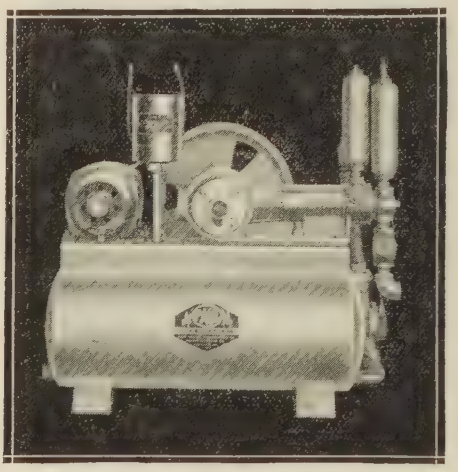
*With a.c. 1-phase, 60-cycle, 110 or 220-volt motor or d.c. 32, 110, or 220-volt motor.

†Model 193 is not equipped with tank or air volume control. It is mounted on cast base with floor legs.

Model GK Paul Shallow Well Water Systems

Fully Automatic—Self-Priming

A Complete Automatic System with 10-Gallon Storage Tank



Standard Equipment

Paul Type K Self-Priming Suction Pump, belt-driven.

Constant duty a.c. or d.c. motor, mounted on pump base. The a.c. motors are of the repulsion induction type.

Electric welded tank, heavily galvanized inside and out, guaranteed for a working pressure of 75 pounds.

V-belt drive, operating on V-motor pulley and flat face belt wheel.

Fixtures include automatic air volume control, which automatically maintains proper water level and volume of air; Paul Relief Valve for protection against excessive pressure; and all pipe and fittings connecting pump and tank.

The Type G Improved Pressure Controller, double pole, diaphragm operated, starts pump at 20 pounds and stops at 40 pounds.

Pump, tank, and pipe are finished in jade green lacquer. The motor is black enamel. Fittings are gold and nickel trimmed.

Model No.		**1931-GK**
Each		**$72.50**
Pump Capacity	g.p.h.	200
Tank Capacity	gallons	10
Motor H.P		1/6
Size Suction Pipe	inches	¾
Size Service Pipe	inches	¾
Height	inches	29
Width	inches	14
Length	inches	32
Shipping Weight	pounds	130

Type GK Paul Shallow Well Pumps

Fully Automatic—Self-Priming—Motor Driven

This suction pump covers a large range of domestic or farm requirements, lifting water from any source of supply not more than 22 feet below its level. It may be operated automatically in connection with any style or size of pressure tank; this pump may be installed to operate on an open tank service by using an automatic float.

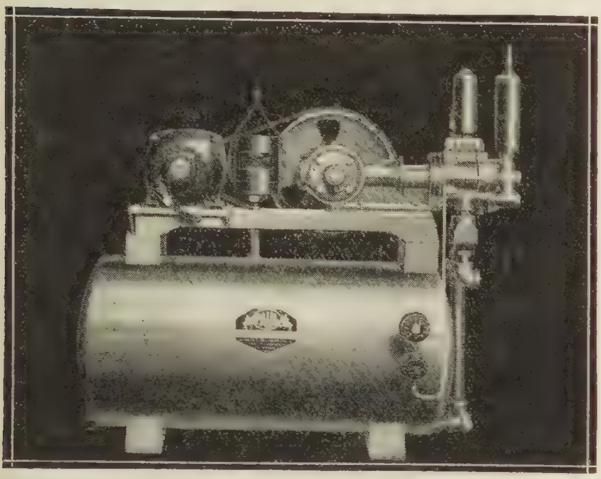
Standard equipment includes Paul Type GK Self-Priming Suction Pump, V-belt driven; constant duty a.c. or d.c. motor, mounted on base plate with pump; and Type G Improved Pressure Controller, double pole, diaphragm operated, which starts pump at 20 pounds and stops at 40 pounds.

Model No.		**191-GK**
Each		**$62.50**
Capacity	g.p.h.	200
Motor H.P		⅙
Size Suction and Service Pipe	inches	¾
Height	inches	25
Width	inches	31
Depth	inches	11
Shipping Weight	pounds	135

Model SP Paul Shallow Well Water Systems

Fully Automatic—Self-Priming

A Complete Automatic System with Storage Tank



Especially designed for the requirements of the average home, either for soft water or complete water service, where the water level of the source of supply is not more than 22 feet below the pump.

Has standard constant duty a.c. or d.c. motor. The a.c. motors are of the repulsion induction type.

Fitted with automatic air volume control which automatically maintains proper water level and volume of air, and Paul Relief Valve for protection against excessive pressure, and all pipe and fittings connecting pump and tank.

The Type G Improved Pressure Controller, double pole, diaphragm operated, starts pump at 20 pounds and stops at 40 pounds.

Pump, tank, and pipe are nickel bronze. Motor is black enamel. Fittings are gold and nickel trimmed.

The Model No. 250-SP System has Paul Type K Self-Priming Suction Pump, belt-driven; electric welded tank, heavily galvanized, and guaranteed for a working pressure of 75 pounds; and V-belt drive, operating on V-motor pulley and flat face belt wheel.

Model Nos. 300-SP and 400-SP have Paul Type L Self-Priming Suction Pump, belt-driven; electric welded tank, heavily galvanized, and guaranteed for a working pressure of 85 pounds; and are fitted with a pressure gauge showing pressure in the pressure tank.

Model No.	Each	Pump Cap. G.P.H.	Tank Cap. Gal.	Motor H.P.	Suc. & Serv. Pipe, In.	Ht. In.	Wdth. In.	Lgth. In.	Ship Wt. Lbs.
250-SP	**$105.00**	250	25	¼	¾	29	16	32	140
300-SP	**130.00**	300	30	⅓	1	38	20	41	270
400-SP	**142.00**	400	30	½	1	38	20	41	280

Type L Paul Shallow Well Pumps

Double Acting—Fully Automatic
Self-Priming—Motor Driven

This suction pump covers a large range of domestic or farm requirements, lifting water from any source of supply not more than 22 feet below its level. It may be operated automatically in connection with any style or size of pressure tank; this pump may be installed to operate on an open tank service by using an automatic float switch.

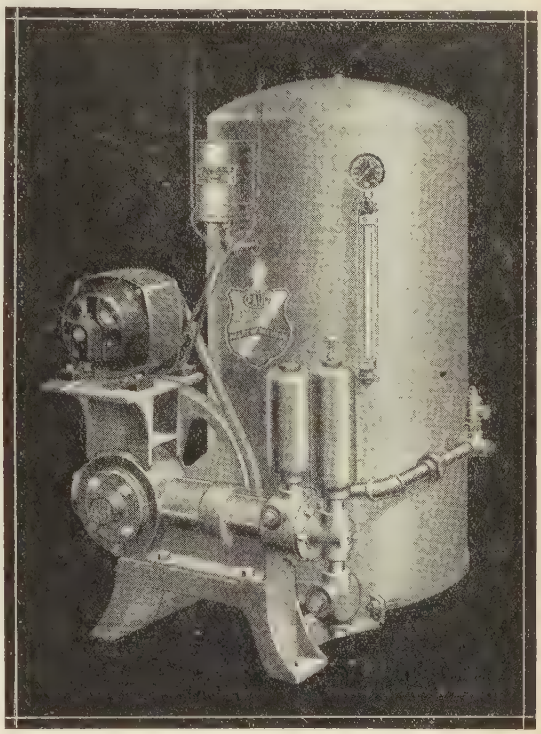
Standard equipment includes Paul Type L Self-Priming Suction Pump, V-belt driven; constant duty a.c. or d.c. motor, mounted on base plate with pump; and Type G Improved Pressure Controller, double pole, diaphragm operated, which starts pump at 20 pounds and stops at 40 pounds.

Model No.	Each	Cap. G.P.H.	Motor H.P.	Suc. & Serv. Pipe, In.	Ht. In.	Wdth. In.	Lgth. In.	Ship. Wt. Lbs.
300-LM	**$100.00**	300	⅓	1	26	16	38	160
400-LM	**109.00**	400	½	1	26	16	38	170

Type US Paul Shallow Well Water Systems

Fully Automatic—Self-Priming

A Complete Automatic System with Storage Tank



Especially designed for the requirements of the average home, either for soft water or complete water service, where the water level of the source of supply is not more than 22 feet below the pump.

Its compact arrangement requires the minimum of floor space. There is no muss from oil or water leaks, and no stuffing boxes to require adjustment.

The Paul Direct-from-Well Attachment may be used in connection with this system to furnish water fresh from the source, for drinking purposes.

Standard Equipment

Paul Type K Self-Priming Suction Pump, belt driven.

Standard constant duty a.c. or d.c. motor, mounted directly above the pump. The a.c. motors are of the repulsion induction type.

Electric welded tank, heavily galvanized inside and out, and guaranteed for a working pressure of 85 pounds.

Fixtures include water gauge showing the water level in the pressure tank, pressure gauge showing pressure in the pressure tank, Paul Relief Valve for protection against excessive pressure, and all pipe and fittings connecting pump and tank.

The Type G Improved Pressure Controller, double pole, diaphragm operated, starts pump at 20 pounds and stops at 40 pounds. Controller may be adjusted for other pressures.

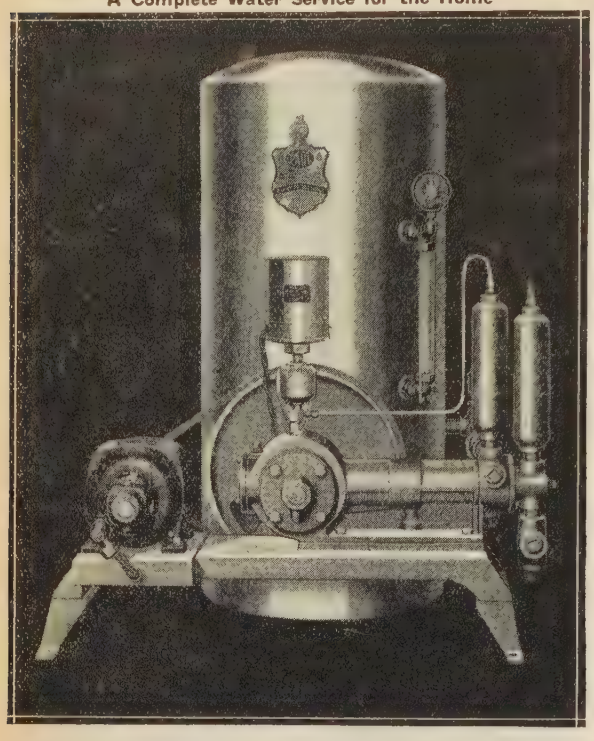
Pump, tank, and pipe are royal blue lacquer. Motor is black enamel. Fittings are brass and nickel trimmed.

Model No.	Each	Pump Cap. G.P.H.	Tank Cap. Gal.	Motor H.P.	Suc. & Serv. Pipe In.	Ht. In.	Wdth. In.	Dpth. In.	Ship. Wt. Lbs.
950-US	**$106.00**	200	30	⅙	¾	36	26	34	225
951-US	**113.00**	200	50	⅙	¾	55	28	36	300
960-US	**113.00**	250	30	¼	¾	36	26	34	230
961-US	**120.00**	250	50	¼	¾	55	28	36	305

Type K Paul Shallow Well Water Systems

Fully Automatic—Self-Priming

A Complete Water Service for the Home



This type of system is especially adapted for complete water service in the average home, or soft water service if a large reserve supply is desired. It will pump from cistern, well, lake, or stream, wherever the water is not more than 22 feet below the level of the pump.

If the system is used for supplying water for drinking purposes, it is recommended that the pump be equipped with a Paul Direct-from-Well Attachment.

Standard Equipment

Standard equipment includes Paul Type K Self-Priming Suction Pump, belt driven; standard constant duty a.c. or d.c. motor, mounted on pump base; electric welded tank, galvanized and tested for 85 pounds working pressure; water gauge, pressure gauge, and relief valve.

The Type G Improved Pressure Controller, double pole, diaphragm operated, starts pump at 20 pounds and stops at 40 pounds. Range may be adjusted at other pressures if desired. Controller is mounted in connection with non-pulsating device, producing quiet operation.

Model No.	Each	Pump Cap. G.P.H.	Tank Cap. Gal.	Motor H.P.	Suc. & Serv. Pipe, In.	Ht. In.	Wdth. In.	Dpth. In.	Ship. Wt. Lbs.
950-K	**$105.00**	200	30	1/6	3/4	32	27	32	250
951-K	**115.00**	200	50	1/6	3/4	54	27	32	270
952-K	**123.00**	200	80	1/6	3/4	66	27	32	340
953-K	**126.00**	200	100	1/6	3/4	66	27	34	345
954-K	**130.00**	200	120	1/6	3/4	66	30	36	375
960-K	**110.00**	250	30	1/4	3/4	32	27	32	270
961-K	**120.00**	250	50	1/4	3/4	54	27	32	290
962-K	**128.00**	250	80	1/4	3/4	66	27	32	355
963-K	**134.00**	250	100	1/4	3/4	66	27	34	370
964-K	**138.00**	250	120	1/4	3/4	66	30	36	390

Type K Paul Shallow Well Pumps

Fully Automatic—Self-Priming—Motor Driven

This pump will lift water from any source of supply not more than 22 feet below its level. May be operated automatically in conjunction with any style or size of pressure tank. May be installed to operate upon an open tank service by using an automatic float.

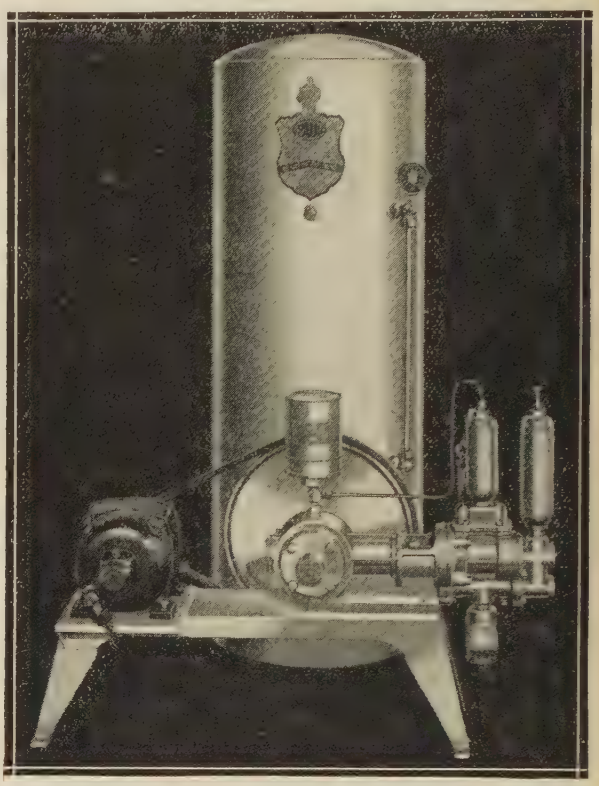
Equipped with Paul Type K Suction Pump, V-belt driven; constant duty a.c. or d.c. motor; and Type G Pressure Controller.

Model No.	Each	Cap. G.P.H.	Motor H.P.	Suc. & Serv. Pipe, In.	Ht. In.	Wdth. In.	Dpth. In.	Ship. Wt. Lbs.
95-KM	**$70.00**	200	1/6	3/4	25	31	11	135
96-KM	**75.00**	250	1/4	3/4	25	31	11	140

Type L Paul Shallow Well Water Systems

Double Acting—Fully Automatic—Self-Priming

A Complete Water Service with 50 to 120-Gallon Tank



This type of system is especially adapted for complete water service in the average home, or soft water service if a large reserve supply is desired. It will pump from cistern, well, lake or stream, wherever the water is not more than 22 feet below the level of the pump.

If the system is used for supplying water for drinking purposes, it is recommended that, because of the large size of the tank, the pump be equipped with a Paul Direct-from-Well Attachment.

The pump and tank, being mounted separately, permit that the installation be arranged to suit the location.

Standard Equipment

Paul Type L Self-Priming, Suction Pump, belt driven.

Standard constant duty a.c. or d.c. motor, mounted on pump base. The a.c. motors are of the repulsion induction type.

Electric welded tank, galvanized inside and out by the hot dip process. Tested for 85 pounds working pressure.

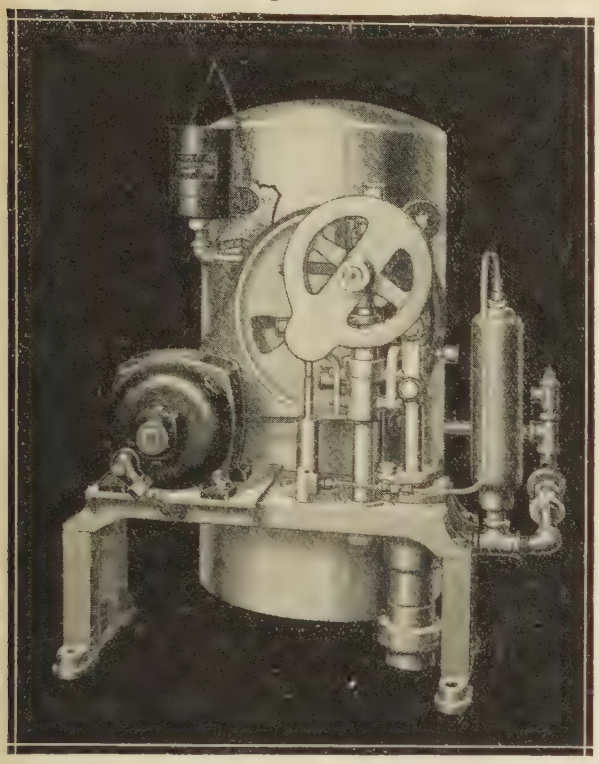
Type G Improved Pressure Controller, double pole, diaphragm operated. Starts pump at 20 pounds and stops at 40 pounds. Range may be adjusted at other pressures if desired.

Fitted with water gauge, pressure gauge, and relief valve.

Pump, controller and base are finished in royal blue lacquer. Tank is natural galvanized.

Model No.	Each	Pump Cap. G.P.H.	Tank Cap. Gal.	Motor H.P.	Suc. & Serv. Pipe In.	Ht. In.	Wdth. In.	Lgth. In.	Ship. Wt. Lbs.
301-LA	**$134.00**	300	50	1/3	1	48	36	38	370
302-LB	**142.00**	300	80	1/3	1	60	38	38	425
303-LC	**147.00**	300	100	1/3	1	60	40	38	440
304-LD	**150.00**	300	120	1/3	1	60	42	38	460
401-LA	**141.00**	400	50	1/2	1	48	36	38	380
402-LB	**149.00**	400	80	1/2	1	60	38	38	435
403-LC	**154.00**	400	100	1/2	1	60	40	38	450
404-LD	**157.00**	400	120	1/2	1	60	42	38	470

Type US Paul Deep Well Cushion Stroke Systems



A completely automatic water system, delivering the water from the well to point of use under pressure. Assembled into a sturdy, compact unit especially designed for the requirements of the average bome.

Standard Equipment

Equipment includes Paul Type J Cushion Stroke Deep Well Pump, belt driven; standard a.c. or d.c. motor, mounted on pump base; electric welded tank, galvanized, and guaranteed for a working pressure of 85 pounds.

Has Paul Deep Well Cylinder of either the spring or ball valve type, and either octagon ash wood or round steel pump rod, depending upon type of cylinder used.

Type G Improved Pressure Controller is double pole, diaphragm operated. Starts pump at 20 pounds and stops at 40 pounds. May be adjusted for other pressures as desired.

Water gauge, relief valve, and all pipe and fittings connecting pump and tank.

Model No.	Each	Pump No.	Pump Cap. Gal.	Tank Cap. Gal.	Ht. In.	Wdth. In.	Dpth. In.	Ship. Wt. Lbs.
480-US	$150.00	48-J	120	30	36	32	36	310
490-US	160.00	49-J	120–160	30	36	32	36	320
500-US	180.00	50-J	165–220	50	42	38	44	500
505-US	200.00	505-J	165–330	50	42	38	44	510

Type J Paul Deep Well Cushion Stroke Pumps

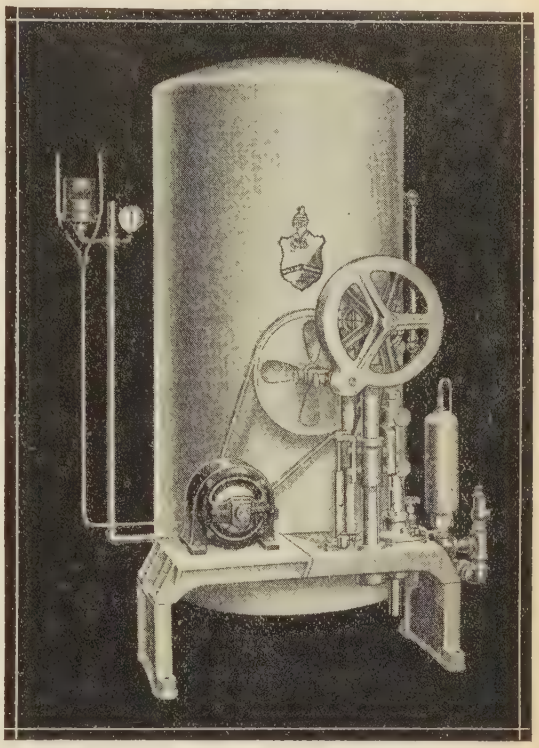
Fully Automatic—Motor-Driven

120 to 1950 Gallons per Hour

This pump may be used for fully automatic water supply with a pneumatic tank; or it may be operated by the Paul Float Switch, maintaining the desired level in an open storage tank. Compactly assembled upon a heavy cast-iron bedplate with motor and air chamber.

Model No.	Each	Pump No.	Pump Cap. Gal.	Ht. In.	Wdth. In.	Dpth. In.	Ship. Wt. Lbs.
48-JM	$110.00	48-J	120	20	23	12	210
49-JM	120.00	49-J	120–160	20	23	12	225
50-JM	150.00	50-J	165–270	36	34	15	315
505-JM	170.00	505-J	165–330	36	34	15	335
51-JM	271.00	51-J	300–445	50	44	24	650
53-JM	300.00	53-J	400–595	50	44	24	680
54-JM	500.00	54-J	680–1260	66	58	28	1250
56-JM	577.00	56-J	815–1950	66	58	28	1300

Type J Paul Deep Well Cushion Stroke Systems



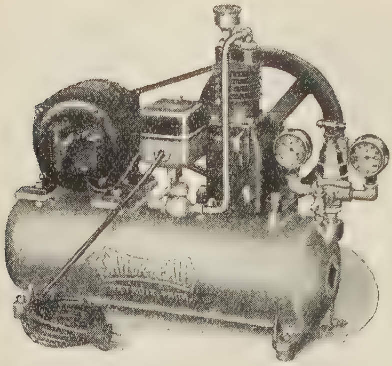
This system is equipped with a Paul Type J Cushion Stroke Deep Well Pump, belt-driven. This pump is designed to pump water from any deep well where the water level is beyond the lift of the suction pump. Its wide range of capacities and sizes offers complete water service for home, farm, factory, or institution where water is needed.

The motor is standard a.c. or d.c., mounted on pump base. The a.c. motor is of repulsion induction type. Has Paul Deep Well Cylinder of either spring or ball valve type, and either octagon ash wood or round steel pump rod, depending upon type of cylinder used. Electric welded tank, galvanized and tested for 85 pounds working pressure. Fittings include water gauge, pressure gauge, and relief valve.

If the system is used for supplying water for drinking purposes, it is recommended that the pump be equipped with a Paul Direct-from-Well Attachment.

Model No.	Each	Pump No.	Pump Cap. Gal.	Tank Cap. Gal.	Ht. Ft.	Wdth. Ft.	Dpth. Ft.	Ship. Wt. Lbs.
481-J	$152.00	48-J	120	50	4½	2	2½	340
482-J	160.00	48-J	120	80	5½	2	3	405
483-J	165.00	48-J	120	100	5½	2	3	420
484-J	168.00	48-J	120	120	5½	2	3½	430
491-J	165.00	49-J	120–160	50	4½	2	2½	355
492-J	173.00	49-J	120–160	80	5½	2	3	420
493-J	178.00	49-J	120–160	100	5½	2	3	435
494-J	180.00	49-J	120–160	120	5½	2	3½	445
501-J	195.00	50-J	165–270	50	4½	3	3½	450
502-J	200.00	50-J	165–270	80	5½	3	4	515
503-J	205.00	50-J	165–270	100	5½	3	4	530
504-J	208.00	50-J	165–270	120	5½	3	4½	540
5051-J	215.00	505-J	165–333	50	4½	3	3½	470
5052-J	220.00	505-J	165–333	80	5½	3	4	535
5053-J	225.00	505-J	165–333	100	5½	3	4	550
5054-J	228.00	505-J	165–333	120	5½	3	4½	560

Model 930-K Saylor-Beall Automatic Electric Beer Pressure Air Pumps



Designed for the average service bar having 1 to 4 taps. Draws air through a felt filter located on top of compressor. Pipe fittings are of bronze, cadmium-plated. Storage tank is automatically controlled at a pressure of 30 to 55 pounds.

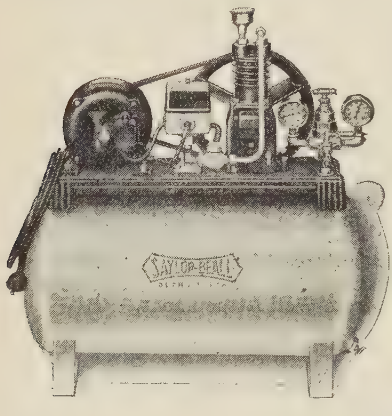
Compressor running continually will cost about three-quarters of a cent per hour.

Complete unit, with 2½-gallon storage tank, galvanized, occupies only 1.58 square feet floor space. Height, 19½ inches; width, 9½ inches; length, 24 inches over all.

With automatic pressure switch, tank pressure gauge, safety valve and regulator and gauge for pressure at taps. Standard equipment includes a ¼-h.p., 110-volt, 60-cycle G-E motor with V-belt drive. Operates compressors at 450 r.p.m., and at this speed has a piston displacement of 1.43 cubic feet of air per minute. Relief valve set at 70 pounds pressure.

Model **930-K**, Complete	each	**$69.50**
Extra for D.C. ¼-H.P., 115 Volts	each	**7.00**

Model 950-K Saylor-Beall Automatic Electric Beer Pressure Air Pumps



Recommended for dispensers having 6 to 12 taps where volume and constant air pressure is required. Storage tank automatically controlled at a pressure of 30 to 55 pounds. Completely equipped with air regulator with gauge, also storage tank pressure gauge.

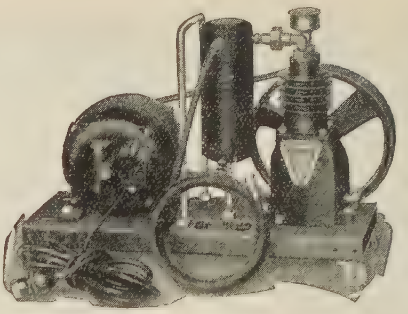
To assure quietness, moving parts are cushioned with rubber. Pipe fittings are of bronze, cadmium-plated.

Complete unit, with 11-gallon galvanized storage tank, occupies 2.07 square feet floor space. Height, 26 inches; width, 13 inches; length, 25 inches over all.

Standard equipment includes a ¼-h.p., 110-volt, 60-cycle G-E motor for a.c. with V-belt drive. It operates compressor at 450 r.p.m., and at this speed has a piston displacement of 1.43 cubic feet of air per minute. Relief valve set at 70 pounds pressure.

Model **950-K**, Complete	each	**$79.50**
Extra for D. C. ¼-H.P., 115 Volts	each	**7.00**

Model 116-KC Saylor-Beall Portable Air Compressors



This compressor furnishes compressed air for spraying paints or lacquers, tire inflation, operating small tools and many other purposes. Ideal for use in homes, hotels, apartments, hospitals, schools, office buildings, etc.

Simple in design and sturdy in construction.

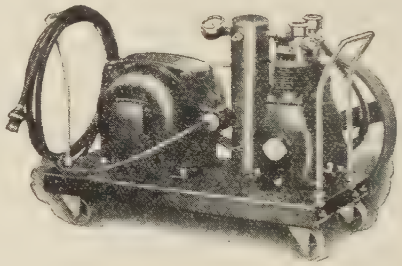
Adjustable rubber belt drive. With bronze bearings; positive lubrication. Fittings are cadmium-plated. Rubber hose, 14 feet of 3-ply cloth inserted with connections.

Finished in red and black enamel.

Motor, ¼ h.p., 110 volts, 60 cycles, a.c.

Model		116-KC
Each		**$39.50**
Extra for D. C. Motor, ¼-H. P., 115 Volts		**$7.00**
Bore	inches	2
Stroke	inches	1¾
Speed	r.p.m.	755
Piston Displacement, Free Air per Minute	cu. ft.	2.42
Pressure	pounds	45
Shipping Weight	pounds	76

Model 590-K Saylor-Beall Portable Air Compressors



This twin cylinder unit is designed especially to meet all requirements for compressed air up to a volume of 6 cubic feet of free air per minute.

Develops a sufficient volume and pressure of air to operate mostly all of the larger paint spray guns and small pneumatic tools. Used by painters, stone-cutters and for garages, factories, hotels, apartment houses, etc.

Where high pressure and lower volume are required, a change is made in the motor pulley at slight additional cost, and the relief valve set to operate at 90, 120 or 150 pounds pressure.

Adjustable rubber belt drive. Special dipper type lubrication. Fittings are cadmium-plated. Bearings are of bronze. Finished in red and black enamel.

Motors, ¾ h.p., 110/220 volts, 60 cycles, a.c.

Model		590-K
Each		**$129.50**
Bore	inches	2½
Stroke	inches	2
Speed	r.p.m.	730
Piston Displacement, Free Air per Minute	cu. ft.	8.25
Pressure	pounds	50–60
Shipping Weight	pounds	185

Model 317-K Saylor-Beall Spray Guns
For Use with Model 116-KC Air Compressors

Can be used as a syphon or pressure type and also with a pressure feed material tank.

The adjustments on the material and air nozzles are so constructed that any width of spray can be obtained from ½ inch to 10 inches. All grades of paints, lacquers, enamels, varnishes, oils, insecticides and other liquids can be sprayed successfully.

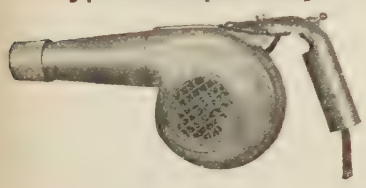
The material cup is of heavy copper and will stand 75 pounds pressure without bulging the bottom. The threads are machined on a brass ring soldered on cup and then ground to give an even, flat surface for gasket, to prevent leaks. Threads machined in this manner will wear indefinitely. Capacity of cup, 1 full quart.

The internal spray nozzles are machined from brass and chromium-plated to increase durability. External nozzles are made from same material and nickel-plated.

In order to do all kinds of spraying it is advisable to have a complete set of air and material nozzles which includes flat and round nozzles of both internal and external atomizing types. Internal nozzles are specially adapted to spray slow drying materials and the external for fast drying materials, such as lacquers and enamels. Complete instructions are packed with every spray gun.

Model	Description	Each
317-KA	With Internal Atomizing Fan Spray Nozzle	$10.00
317-KB	With External Atomizing Fan Spray Nozzle	11.00
317-KC	With External and Internal Atomizing Fan Spray Nozzle	12.75
317-KD	With Complete Set of Nozzles	16.00
317-KE	With 6-Inch Oiling and Cleaning Nozzles	11.00
317-KF	With 10-Inch Oiling and Cleaning Nozzles	11.50

Type 403 Speedway Portable Blowers



A powerful 5-pound tool that delivers a blast of clean, dry air at high velocity for cleaning and drying purposes. Indispensable wherever dust and dirt collect on motors, etc.

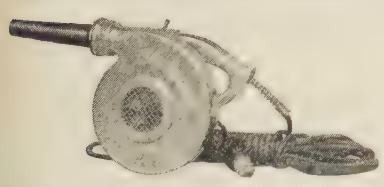
Universal motor operates a centrifugal fan at 12,000 r.p.m. Made of pressed steel throughout. Soft rubber nozzle covering prevents shorting when cleaning electrical apparatus. Toggle switch is located at operator's thumb.

Equipped with 8-foot cord, unbreakable rubber plug and soft rubber nozzle covering. Universal motor, 110 volts.

Operates from any light socket and is easily handled.

Type 403 ..... each $19.50

Sturtevant Big Midget Portable Blowers

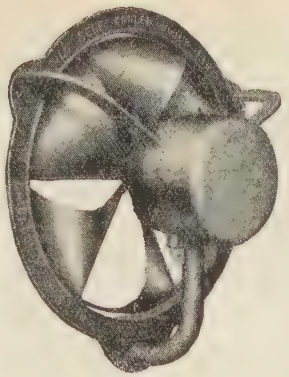


Delivers dry air for removing dust from machinery. Compressed air ordinarily contains moisture; this blower shoots dry air. Does away with air lines and lugging a hose around, and work is reached from all sides. Has ⅙ h.p. universal motor, 110 or 220 volts; speed, open outlet, 9895 r.p.m., closed outlet, 11100 r.p.m.; volume delivered, 43.2 cubic feet per minute; air velocity, 14820 feet per minute; static pressure, outlet closed, 16.62 ins. water; inside diameter nozzle, ¾ inch.

Furnished with 20 feet cord and plug; switch in handle. Weight, 7 Pounds.

Price ..... each $50.00

Ilg Self-Cooled Propeller Fans



The construction of the Ilg Fan combines strength and simplicity. The round-bodied motor fits into a cast iron ring supported by forged arms fastened to the outer ring. This makes it possible to interchange or replace motor without disturbing the alignment. Frame and motor can be installed separately, thus dividing weight.

The vacuum that is created at the axis of the motor draws a current of cool air from the outside over the motor, after which it is carried away with the general exhaust.

The Ilg Lubricating System is used on all fans larger than the 20-inch size. This system permits the lubrication of the motor, while the fan is in operation, by providing grease cups at the front of the ball bearing motors.

A.C., 2-Speed, 50-60-Cycle, Single Phase

Type Size	110-220 Volts Each	Speed R.P.M.	C.F.M.	Watts Input	Motor Frame No.	Ship. Wt., Lbs.
*12 Ilgair	$38.00	1140	750	70	13	35
*16 Ilgair	65.00	855	1000	100	15	65
*16 S.H.	63.00	1140	1400	100	15	65
16S	84.00	855 1140	1000 1400	100	15	65
18S	115.00	855 1140	1750 2300	170	D- 87	90
20S	136.00	855 1140	2400 3200	250	D- 87	130
24S	193.00	600 855	2880 4100	275	D-102	190
30S	252.00	500 685	5420 7300	350	D-101	265
36S	399.00	400 570	6900 9650	500	D-104	500
42S	†425.00	380 490	9800 12300	800	D-104	675

*Single speed only. †For 220 volts only.

A.C., 50-60-Cycle, 2 or 3-Phase

Type Size	220-440 Volts Each	550 Volts Each	Speed R.P.M.	C.F.M.	Watts Input	Motor Frame No.	Ship. Wt., Lbs.
18M	$122.00	$149.00	1140	2300	120	87	100
20M	136.00	169.00	1140	3200	200	87	150
24M	157.00	189.00	855	4100	250	102	225
30M	189.00	220.00	685	7300	400	101	325
36ML	304.00	346.00	490	8300	460	104	450
36M	304.00	346.00	570	9650	460	104	460
42M	350.00	390.00	490	12300	800	104	630
48M	470.00	480.00	490	18400	1300	105	780
54M	820.00	920.00	425	23200	1950	107	900
60M	1030.00	1180.00	380	28400	2000	108	1150
72M	1220.00	1380.00	315	40500	2100	109	1600

D.C.

Type Size	110-220 Volts Each	500 Volts Each	Speed R.P.M.	C.F.M.	Watts Input	Motor Frame No.	Ship. Wt., Lbs.
12 Ilgair	$ 42.00	.....	1140	750	70	100	35
16B	73.00	.....	1140	1400	100	1/8	65
18B	105.00	.....	1140	2300	150	1/6	90
24A	210.00	$220.00	855	4100	300	1197	235
30A	252.00	265.00	690	7300	440	1199	345
36A	378.00	397.00	570	9650	600	1207	450
42B	440.00	462.00	490	12300	800	1207	625
48B	590.00	620.00	490	18400	1300	1211	890
54B	870.00	913.50	425	23200	1800	1213	1025
60B	1200.00	1260.00	380	28400	2270	1215	1520
72B	1340.00	1407.00	315	40500	2300	1217	1980

Enclosed speed controllers furnished with all d.c. fans except the Type 12 size.

Ilgair Portable Floor Fans

With the Ilgair Portable Floor Fan, the cooling vitalizing blasts of air overcome the heat in operations of all kinds.

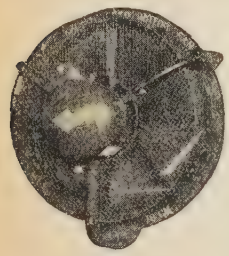
Used for recirculation of air in drying rooms and prevention of stratification in refrigeration rooms.

The 12-inch size is furnished with cord and plug; the 30 and 36-inch sizes furnished with standard enclosed switch.

Size.....in.	12	30	36
A.C.....each	$112.00	410.00	567.00
D.C.....each	$115.00	577.00	703.00
C.F.M.....	2000	10,000	15,000
R.P.M.....	3400	1140	1140
Input.....watts	370	1230	2850
Weight.....lbs.	40	400	550

Ilg Propeller Fan Guards

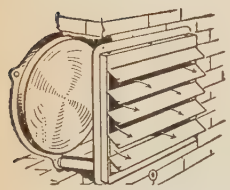
Ilg Woven Wire Guards are strong and durable and do not obstruct flow of air to the fan. Furnished in one, two, or three sections; all sections are interchangeable.



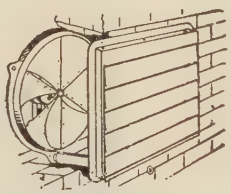
Propeller Fan with 3-Section Guard

Size Inches	Per Section Each	Complete Each	Weight Pounds Complete
12	$3.00	$9.00	2
16	3.20	9.60	2¼
18	3.50	10.50	3½
20	5.25	15.75	4
24	6.30	18.90	5
30	7.35	22.00	8
36	8.80	26.40	11
42	9.35	28.00	15
48	11.70	35.00	24
54	15.00	45.00	38
60	20.00	60.00	50
72	26.70	80.00	75

Ilg Automatic Shutters



Fan Running



Fan Not Running

These shutters are used on the outside of propeller fans to protect the fan when not running and also to keep out the wind, rain, snow and cold.

Ilg Automatic Shutters are built of special hard rolled aluminum leaves, pressed on Whiting Alloy copper coated rods supported in cast frame.

When fan is running, the shutter is held open by the force of the air current. When fan is shut off, the shutter closes automatically by gravity.

Shutters are moisture proof and need no attention after they are installed.

Size of shutter corresponds to size of fan.

Sizes 48-inch and larger are built in two sections.

Size Inches	Approx. Shipping Wt., Lbs.	Price Each	Size Inches	Approx. Shipping Wt., Lbs.	Price Each
12	10	$8.00	36	112	$52.00
16	19	11.00	42	152	75.00
18	30	13.00	48	188	100.00
20	43	16.00	54	195	120.00
24	67	19.00	60	210	170.00
30	80	36.00	72	314	190.00

Type P Ilg Volume Blowers

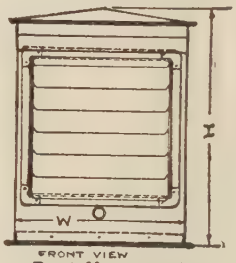
The Ilg Type P Volume Blower is designed to handle small quantities of air over a pressure range of ½ to 3 inches. The housing is of heavy cast-iron; the wheel is of cast aluminum.

This blower can be hung from ceiling or suspended from side wall and fitted into any one of four different discharges quickly and easily.

It is particularly useful for exhausting fumes from chemical laboratories. It can also be used for handling light dust from polishing wheels and grinders and is suitable for any small exhaust purpose where a considerable amount of resistance is caused by a long run of small duct. The 7½ Type P Blower at 3400 r.p.m. can be satisfactorily used on single-fire blacksmith forges.

Size No.	110 Volts Each	220 Volts Each	Rated R.P.M.	C.F.M.	Watts Input	Shipping Wt., Lbs.
A.C., 60-Cycle, Single Phase						
7½P	$60.00	$62.00	3400	225	200	62
10P	80.00	81.00	1720	300	160	68
15P	105.00	110.00	1720	450	250	115
20P	240.00	246.00	1720	1310	850	285
A.C., 60-Cycle, 3-Phase						
20P	.....	$213.00	1720	1310	850	285
A.C., 25-Cycle, Single Phase						
10P	$79.00	$90.00	1420	205	110	65
15P	111.00	115.00	1420	375	160	105
20P	272.00	277.00	1420	1090	490	245
D.C.						
7½P	$57.00	$60.00	3400	225	200	62
10P	74.00	78.00	1720	300	160	68
15P	103.00	108.00	1720	450	250	115
20P	192.00	200.00	1720	1310	850	285

Ilg Power Roof Ventilators



Pent-House with Automatic Shutter

The Ilg Power Roof Ventilator is for buildings where roof ventilation provides the only practical means of exhausting foul air.

With this ventilator there is a constant suction created by the Ilg Self-Cooled Motor Propeller Fan which is enclosed in the penthouse. The foul, dead air and excess heat are positively and uniformly drawn off by the action of the fan. Wind and weather can have no effect.

Placed above machines in special processes and connected by duct work, the unit serves as a fume or smoke and heat exhauster. Since heat's natural direction of travel is upward, the Ilg Power Roof Ventilator has found wide use in every industry confronted with excessive heat.

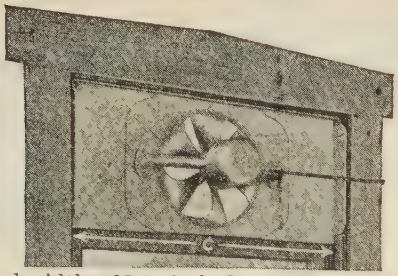
The Ilg Self-Cooled Motor Propeller Fan is mounted within a sheet steel penthouse. Solidly constructed over a heavy angle iron frame, the house is weathertight in every respect.

Furnished complete with shutter. Prices do not include fan.

Size Ventilator In.	Standard Each	Insulated Each	Size Shutter & Fan In.	Penthouse Dimen., In. Depth	Width	Ht.	Ga. Metal	Ship. Wt. Lbs.
12	$63.00	$92.00	12	16	20	30	20	90
16	63.00	94.00	16	16	20	30	20	95
18	73.00	115.00	18	18	24	36	18	105
20	84.00	131.00	20	18	26	36	18	135
24	99.00	147.00	24	21½	30	42	18	170
30	142.00	199.00	30	25¼	36	49	18	235
36	189.00	250.00	36	27¼	44	58	18	400
42	280.00	350.00	42	32	50	62	18	580
48	360.00	450.00	48	36	56	72	18	740
54	550.00	660.00	54	40	63	82	16	820
60	630.00	770.00	60	44	69	98	16	910
72	930.00	1100.00	72	48	82	102	16	1070

Ilgair 12-Inch Adjustable Portable Ventilators

With Adjustable Steel Panel

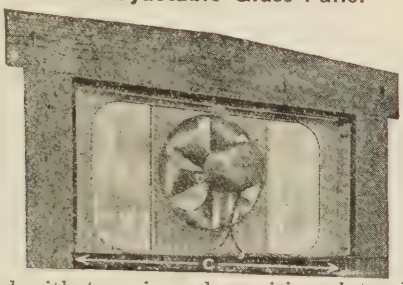


Two panel widths, 26 to 36 inches and 36 to 46 inches.

Finished in ivory. Supplied with 10 feet of rubber covered cord with switch and plug. Exhausts 750 cubic feet of air per minute. Shipping weight, 40 pounds.

50–60–Cycle 110 Volts A.C. ..... each **$41.00**
110 Volts D.C., 25-Cycle A.C. ..... each **45.00**

With Adjustable Glass Panel

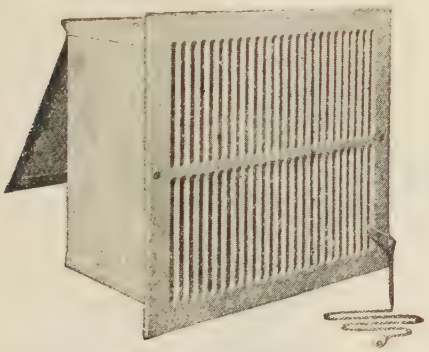


Furnished with two-piece clear vision plate glass panel supported in stainless steel frame. Adjustable panel widths, 30 to 36 inches, 36 to 42 inches, and 42 to 48 inches.

50–60–Cycle 110 Volts A.C. ..... each **$54.50**
110 Volts D.C., 25-Cycle A.C. ..... each **67.00**

Ilgair Kitchen Ventilators

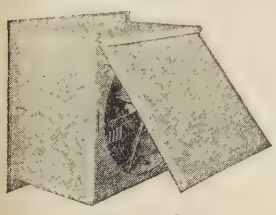
12-Inch Built-In Cabinet Type



This built-in-the-wall type ventilator can be installed in old or new kitchens.

The quiet Ilgair ventilator is inconspicuous behind the clean-cut white grille front.

A nickel silver pull chain operates the Ilgair and opens the outer weather-tight door. No adjustment need be made for different wall thicknesses.



Rear View of Cabinet Showing Weathertight Door

Exhausts 750 cubic feet of air per minute.

Operates at 1140 r.p.m.

Consumes only 70 watts.

Depth, 8⅝ inches; height, 12¾ inches; width, 13⅝ inches.

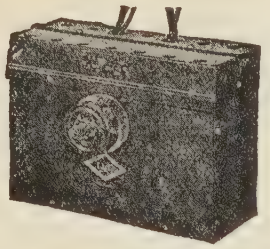
Finished in white.

Shipping weight, approximately 42 pounds.

50–60–Cycle 110 Volts A.C. ..... each **$54.50**
110 Volts D.C. and 25-Cycle A.C. ..... each **67.00**

Ilg Variable Speed Controllers

A.C., 2 and 3-Phase



2-Speed Type

Variable Speed Type

Ilg Variable Speed Controller is furnished for 2 and 3-phase fans.

The 2-speed type gives full speed and approximately 40 per cent reduction. The variable speed type gives variable speed adjustment from full speed to approximately 50 per cent reduction.

Size ..... inches	18, 20, & 24	30 & 36
2-Speed Type ..... each	$76.00	84.00

Size ..... inches	42	48	54, 60, & 70
Variable Speed Type ea.	$161.00	191.00	244.00

No. 55 National Pyramid Brush Assortment

For Fractional Horsepower Motors

Brushes for vacuum cleaners, fans, vibrators, electric ironers, washing machines, sewing machines, food and drink mixers, heat regulators, pumps, electric tools, cash registers and office appliances.

Designed for effective counter or store display. Resale prices for each brush and spring shown on the label in each compartment. Contains 198 brushes of 17 different sizes (3 sizes complete with shunts, springs and terminals) and 100 springs in 3 sizes.

Sizes range between 5/32 in. square and 5/16 in. square with 10 intermediate sizes of round and rectangular brushes including 3 types of brushes with shunts, springs and terminals. Springs are made of the best grade phosphor bronze wire.

No. 55 Assortment Complete **$10.00**

GraybaR QUALITY SINCE 1896
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

Type 53-C Speedway Electric Drills

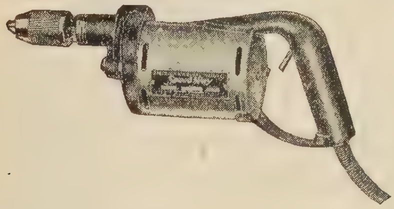
¼ Inch Capacity in Steel

Steel body is finished in chromium.
With oilless, self-aligning bearings, open grip handle, ¼-inch keyless chuck and universal motor. Furnished with 8-foot rubber-covered cable and separable plug.
Over all length, 13 inches. No load speed, 2000 r.p.m. Normal load speed, 1200 r.p.m. Weight, 5½ pounds.

Type 53-C....................................each **$19.50**

Type 56-C Speedway Electric Drills

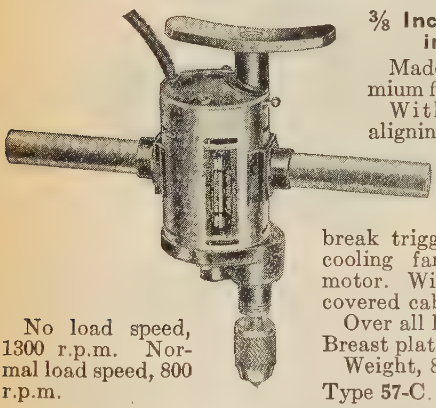
5/16 Inch Capacity in Steel



Steel body is finished in chromium.
With oilless, self-aligning bearings, closed grip handle, 5/16-inch keyless chuck and universal motor. Double gear reduction. With 8-foot rubber-covered cable and plug.
Over all length, 13 inches. No load speed, 1500 r.p.m. Normal load speed, 900 r.p.m. Weight, 6½ pounds.

Type 56-C....................................each **$21.50**

Type 57-C Speedway Electric Drills



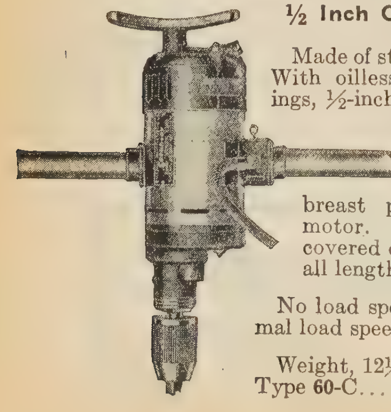
⅜ Inch Capacity in Steel

Made of steel, chromium finish.
With oilless, self-aligning bearings, keyless chuck, ball-bearing thrust, quick-make-and-quick break trigger switch, large cooling fan and universal motor. With 8-foot rubber-covered cable and plug.
Over all length, 14 inches. Breast plate, ⅜-inch.
Weight, 8 pounds.

No load speed, 1300 r.p.m. Normal load speed, 800 r.p.m.

Type 57-C......each **$30.00**

Type 60-C Speedway Electric Drills



½ Inch Capacity in Steel

Made of steel, chromium finish. With oilless, self-aligning bearings, ½-inch keyless chuck, ball-bearing thrust, quick-make-and-break trigger switch, large cooling fan, breast plate and universal motor. With 8-foot rubber-covered cable and plug. Over all length, 15 inches.

No load speed, 500 r.p.m. Normal load speed, 300 r.p.m.

Weight, 12½ pounds.
Type 60-C............each **$45.00**

Speedway Portable Drills

Heavy Duty

Of ball bearing construction.

Operates on both a.c. and d.c. Heavy duty switch, toggle type.

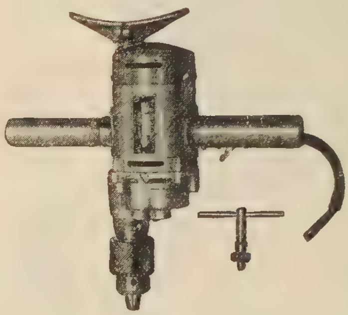
Jacobs 3-jaw key type chuck and chuck key; 8-foot heavy rubber lead cord with indestructible soft rubber split plug connection. Specify voltage when ordering.

Type	88	90	92
Each	**$45.00**	**50.00**	**55.00**
Capacity in Steel....inches	¼	5/16	⅜
No Load Speed....r.p.m.	1450	1100	850
Drilling Speed....r.p.m.	875	650	500
Gear Reduction	13 to 1	17 to 1	22 to 1
Length Over All....inches	14	15	15
Weight....pounds	8	8½	9

Type 59 Speedway Electric Drills

½ Inch Capacity in Steel

Has a wood drilling capacity of 1 inch holes or better; average reaming capacity, 7/16 inch. Has oversize 110 volt universal motor. Heavy duty trigger switch in side handle. Ball bearing construction.

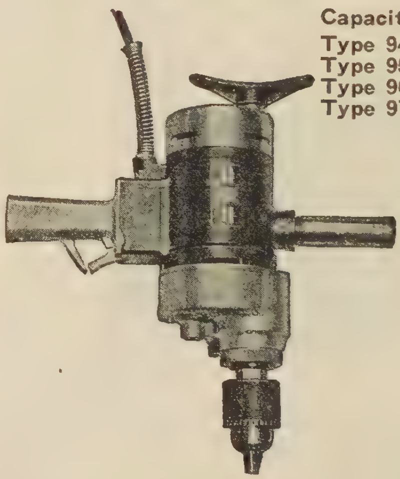


With Jacobs Chuck, chuck wrench, 8-foot lead cord and plug.
Length, 14 inches. Speed r.p.m. load, 350; no load, 700.
Weight, 14 pounds.

Type 59....each **$65.00**

Type 220 Drill Stand....each **22.50**

Speedway Master Electric Drills



Capacity in Steel:
Type 94—⅝ Inch
Type 95—¾ Inch
Type 96—⅞ Inch
Type 97—1¼ Inches

Reaming capacity averages 75 per cent of drilling capacity in steel. Capacity in wood ordinarily runs double capacity in steel and over.
Heavy duty trigger switches can be locked on contact. With 110-volt universal motor, 8-foot lead cord and plug. Types 94 and 95 with Jacobs Chuck and Chuck Wrench; Types 96 and 97 with Nos. 2 and 3 Morse Taper Sockets.

Type	Each	Cap. in Steel In.	Lgth. In.	Load Speed R.P.M.	No Load Speed R.P.M.	Wt. Lbs.
94	**$85.00**	⅝	17½	300	500	23
95	**90.00**	¾	18	250	450	24
96	**100.00**	⅞	18½	200	370	28
97	**115.00**	1¼	19	180	300	28

½-Inch Jacobs Chuck on Morse Taper Arbor for Morse Taper Sockets, for Types 96 and 97....each **$10.00**
Type 223 Drill Stand..............................each **35.00**

Type 6 Speedway Portable Hammers

110 Volts

Primarily built for drilling into concrete, stone, brick, etc., light chipping, channeling, scaling and other uses where a great number of blows is required.

Operates at about 15 per cent of the power cost of operating air tools and without the expense and inconvenience of compressor, air piping hose, etc., Over handwork, the economy is from 80 to 90 per cent. Every tool is controlled by a switch mounted in the handle and equipped with flexible cord and plug. They may be attached to any lamp socket.

A man drilling by hand strikes from 40 to 65 blows per minute, this hammer, 1800 blows per minute. Power cost is negligible, about 15 cents a day for ordinary work. The hammer, element is at all times free from the motor and the strength of the blow is constant. Cannot overload the machine, no burning out of armatures.

Drills 1¼-inch diameter hole in concrete or softstone, and drills 2 inches deep per minute.

Operated on both a.c. and d.c. Watts, 275.

Weight, No. 6, 26 pounds; No. 10, 16 pounds.

Type **6** .... each **$165.00**
Type **10** .... each **110.00**
Add $3.00 for 220 or 32 volts.

For drilling speed in brick multiply by 2. For drilling speed in granite divide by 2 and use diamond drills.

Electric Hammer Stands

Useful for Ceiling Drilling, Taking the Strain Off the Operators

No.	**46**	**46–s**
Each	**$35.00**	**20.00**
Length Feed ....inches	8	8
Minimum Height	7 ft. 6 in.	5 ft.
Maximum Height	12 ft.	7 ft. 8½ in.

Steels for Hammers

The Star drill is especially adapted for working in concrete, brick and soft stone and is regarded as the standard tool for practically all purposes.

4-Point Star Drills, Bull Points, Chisels, Blanks, and Diamond Points

For Type 6 or Type 10 Hammers. Class A.

These sizes are standard.

Diameter Inches	Per Dozen — Drilling Length, Inches: 5	8	12	18	24	36	48
⅜ or Under	**$16.00**	**$19.00**	**$21.00**	**$24.00**	.....	.....	.....
7/16	**17.00**	**19.00**	**21.00**	**24.00**	.....	.....	.....
½	**19.00**	**21.00**	**22.00**	**25.00**	.....	.....	.....
9/16	**20.00**	**21.00**	**22.00**	**25.00**	.....	.....	.....
⅝	**20.00**	**21.00**	**22.00**	**25.00**	.....	.....	.....
¾	.....	**22.00**	**23.00**	**26.00**	**$30.00**	.....	.....
⅞	.....	**22.00**	**24.00**	**27.00**	**31.00**	.....	.....
1	.....	**23.00**	**25.00**	**28.00**	**32.00**	**$39.00**	.....
1⅛	.....	**24.00**	**26.00**	**29.00**	**34.00**	**40.00**	**$46.00**
1¼	.....	**25.00**	**27.00**	**30.00**	**35.00**	**41.00**	**47.00**

Bush Hammers

For Type 6 or Type 10 hammer. Class A
Each **$5.00**

Channeling Tools

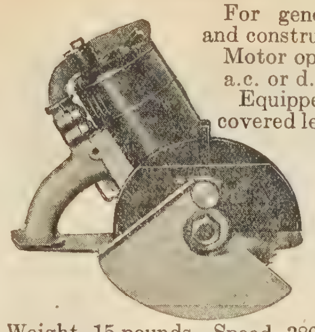
For Type 6 or Type 10 hammer. Class A
Each **$3.00**

Mill Pick Chisels

For Type 6 or Type 10 hammer. Class A
Each **$3.50**

Prices on special tools upon application.

Type 175 Speedway Portable Electric Saws



For general maintenance, carpentry and construction.

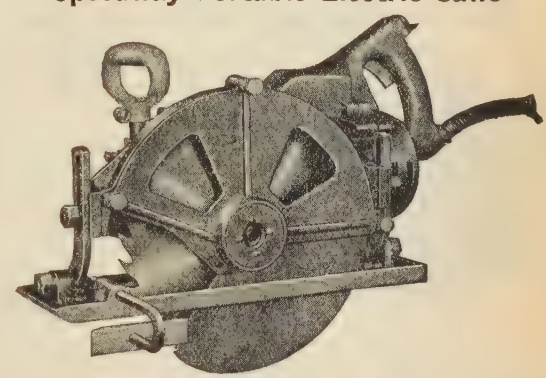
Motor operates from any light socket, a.c. or d.c.

Equipped with 8 feet heavy rubber covered lead cord with soft rubber indestructible split plug connection. Choice of either rip or cross cut blade. A 6-inch blade provides cutting capacity up to 1¾ inches. A 7-inch blade with cutting capacity of 2¼ inches at extra cost.

Length over all, 15 inches. Weight, 15 pounds. Speed, 3800 r.p.m.

Type **175**, 110-Volt .... each **$48.00**
Type **175**, 220-Volt .... each **51.00**
Type **175**, 32-Volt .... each **51.00**

Speedway Portable Electric Saws



Slipper plate can be raised or lowered for adjustment of depth of cut. A ripping guide is mounted on the front of the slipper plate to facilitate long cuts.

Base plate tilts 45° to cut bevels.

Each machine is furnished with a light frame which permits the saw to be turned up side down and used as a table saw.

Swinging saw guard automatically pushes out of the way when cutting pressure is applied and returns to position when pressure is released.

The machine is fitted with ball bearings. All gears and shafts are made from heat treated chrome nickel steel.

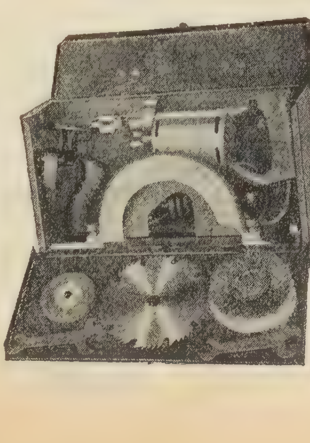
Equipped with an adjustable D type handle. Motor cases, handles, and slipper plates are of cast aluminum.

Furnished complete with necessary wrenches and a carrying case. Runs on either a.c. or d.c.

Type	**183**	**184**	**185**
Each	**$200.00**	**175.00**	**147.50**
Size of Blade ....inches	12	10	10
Size of Cut ....inches	4⅜	3⅜	3⅝
Motor ....h.p.	1	¾	¾
No Load Speed ....r.p.m.	1750	1800	4600
Weight ....pounds	28	25	25

Type 281 Speedway Combination Drill and Saw Kit

Universal Motor



Five power driven portable electric tools are built into this kit. One power unit is adapted to all 5 to make an attractive price for so practical a set.

The set includes a portable saw, drill, grinding wheel, buffer, scratch brush, motor stand, accessory arbor and steel carrying case. Specify voltage. Add $3.00 for 32 or 220 volts.

Price, Type **281** ...
.... each **$37.50**

Speedway Screw-Drivers and Nut-Tighteners

This is a light and compact driver for small and medium sized screws. A simple change from screw-driver tang to nut-socket converts it into nut-tightener.

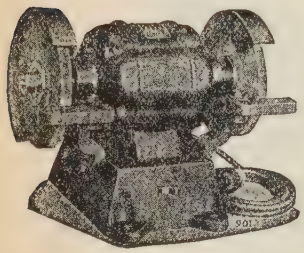
Housing is of drawn steel, electrically welded to handle.

The motor operates on both a.c. and d.c.; 32, 110, or 220 volts. Quick make and break switch, return spring type.

Capacity, No. 16 screws up to 2½ inches.

Type	155	156
Each	$65.00	75.00
No Load Speed.....r.p.m.	700	700
Driving Speed.....r.p.m.	375	375
Clutch	Positive Drive	Positive and Slip Drive
Gear Reduction	26 to 1	26 to 1

Type 122 Speedway Bench Grinders



Oversize shaft and dust-proof ball-bearings are features of this tool.

Operates two 6-inch grinding wheels at 3500 r.p.m. Wheels are well guarded. Has adjustable tool rests.

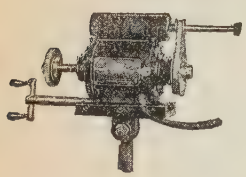
Equipped with ¼-h.p. a.c. or d.c. motor, 110 or 220 volts, not universal.

Weight, 39 pounds.

Type **122**, A.C. Only, 110 or 220 Volts.....each **$35.00**
Type **122**, D.C. Only, 110 or 220 Volts.....each **37.50**
Add for 32 or 220 Volts..... **3.00**

Type 108 Speedway Tool Post Grinders

Universal Motor



Type 108 is a precision grinder combining correct speed with accuracy and ample power. Ball-bearing throughout. Speed of bare grinder is 10000 r.p.m.

Standard equipment includes one 2½ and one 4½-inch grinding wheels. Specify voltage.

Price, Type **108**.....each **$35.00**
Add $3.00 for 32 or 220 volts.

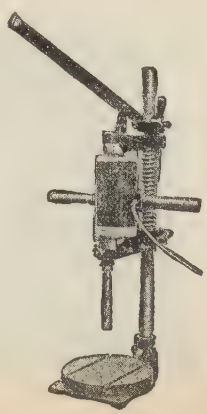
Extra Equipment for Types 108 and 110 Grinders

Price, A, Arm for 3-Inch Internal 30000 R.P.M. each **$20.00**
Price, D, Arm for 5-Inch Internal 10000 R.P.M. each **20.00**
Price, B, Arm for 10-Inch Internal 10000 R.P.M. each **30.00**
Price, E, Arm for 15-Inch Internal 10000 R.P.M. each **35.00**
Price, C, Arm for Button Die Grinding.....each **35.00**

Speedway Portable Drill Stands

The usefulness of a portable drill is greatly increased with the added equipment of a drill stand as shown here.

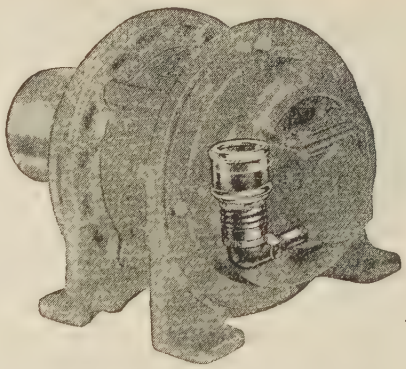
This stand insures perfect alignment and makes drilling a much easier job. A type for each drill is available.



Type	Each	Class	For Use with Drills Types	Weight Pounds
210	**$10.00**	B	49, 53, 56	9
214	**16.00**	B	60	40
220	**22.50**	A	59	41
221	**22.50**	A	88, 90, 92	35
223	**35.00**	A	94, 95, 96, 97	60

Speedway Oilers

Types A and B Constant Level Oilers



Showing Type A Oil Bearing Installed

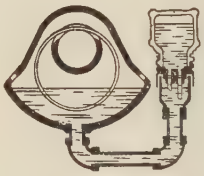
For ring-oiled and waste-packed bearings.

The oil level in the bearing is held at the same height as the opening of the short tube in inverted bottle cap. As soon as the oil gets below this level air enters the jar through this tube, and oil flows out through long tube until level is raised enough to again seal the air opening in the short tube. The oil level cannot vary more than a slight fraction of an inch.

This oiler doubles the capacity of the oil reservoir, so bearings need inspection only half as often. Inspection is simplified and speeded up.

No oil is wasted by this oiler. Every drop goes to the bearing when it is needed.

A glance at the glass tells if oil level is correct. If not, the bottle can be refilled and replaced in an instant. Keep oil in the bottle and the level cannot vary.



For Ring-Oiled Bearings Bottom Opening

Type A oilers are quickly and easily installed on most ring-oiled bearings by connecting directly to the side oil opening.

Type B oilers are used on ring-oiled bearings not having a side opening. They are connected as shown in illustration at left.

Types A or B, 1-Oz. Oil Cap..ea. **$1.25**
Types A or B, 3-Oz. Oil Cap..ea. **1.30**

Type T Thermal Oiler

For plain sleeve bearings.

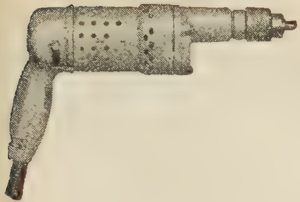
When Speedway Thermal Oilers are used on machine bearings it means fewer repairs, longer life and less depreciation.

Oilers are entirely automatic and are so sensitive to the varying needs of a bearing that they operate on a temperature change of 2 degrees.

Main oil supply is held in the glass bottle A from which it flows as needed to the thermal chamber B. Any slight rise in temperature of bearing is communicated to air imprisoned in B, which expands, forcing oil out of small opening C. Ratio of air and oil in chamber B is always the same, thus insuring uniform operation.

Type T-1 Oiler, 1-Ounce Size.....each **$1.80**
Type T-3 Oiler, 3-Ounce Size.....each **2.00**

Thor 3/16-Inch Light Production Electric Drills



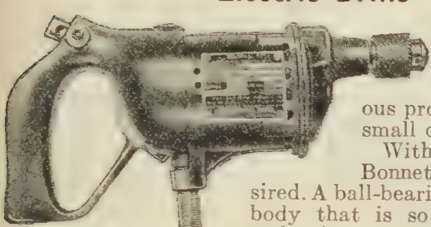
A midget type drill for rapid drilling in small work. Because of its light weight and high power it is particularly adapted for phonograph, radio, piano and automobile work.

Can also be furnished without handle for drilling in close quarters. Equipped with Jacobs chuck.

In ordering, specify voltage desired.

Size		ULB
Each		**$38.00**
Free Speed	r.p.m.	2300
Length Over All	inches	10¾
Weight	pounds	3¼

Thor 3/16-Inch Heavy Production Electric Drills



Built to withstand the drilling service of continuous production work for small drilling operations.

With Jacobs chuck. Bonnet cap furnished if desired. A ball-bearing tool with small body that is so rounded that it makes it easy to grasp.

Specify voltage when ordering.

Size		UKC
Each		**$42.00**
Free Speed	r.p.m.	3500
Length Over All	inches	11
Weight	pounds	5

Thor ¼-Inch Light Duty Electric Drills

Particularly built for light work and for intermittent drilling. This tool is receiving wide service for drilling holes for light manufacturing work.

Large comfortable handle provides a firm, steady grip.

In ordering, specify voltage desired.

Size		UXD
Each		**$30.00**
Free Speed	r.p.m.	2200
Length Over All	inches	11⅜
Weight	pounds	5¾

Thor ¼-Inch Heavy Production Electric Drills

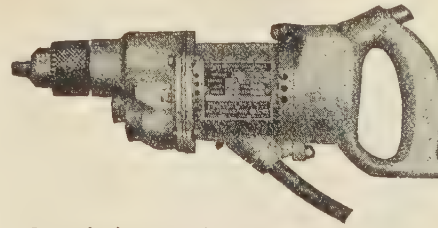
Powerful, rugged drills perfectly balanced with small rounded exterior. Equipped with Jacobs chuck.

Sizes USA and UAC with grip switch; Size UAA with side switch.

In ordering, specify voltage desired.

Size		USA	UAC	UAA
Each		**$45.00**	**47.00**	**47.00**
Free Speed	r.p.m.	2500	2300	2300
Length Over All	inches	12⅝	13⅛	13
Weight	pounds	8	8¼	8¾

Thor 5/16-Inch Heavy Production Electric Drills



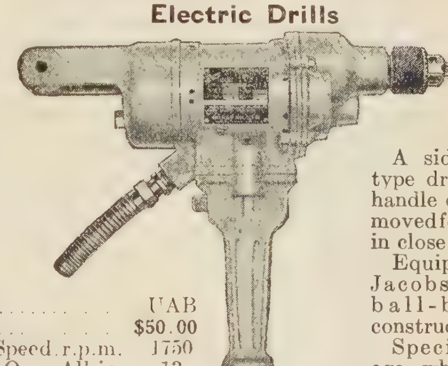
For production drilling in wood or metal.

With Jacobs chuck. Fully balanced and with ball-bearing construction.

In ordering, specify voltage desired.

Size		UAD
Each		**$50.00**
Free Speed	r.p.m.	1750
Length Over All	inches	13⅛
Weight	pounds	8

Thor 5/16-Inch Heavy Production Electric Drills



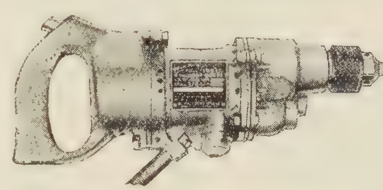
A side switch type drill. Grip handle can be removed for drilling in close quarters.

Equipped with Jacobs chuck; ball-bearing construction.

Specify voltage, when ordering.

Size		UAB
Each		**$50.00**
Free Speed	r.p.m.	1750
Lgth. Over All	in.	13
Wt.	lbs.	8⅛

Thor ⅜-Inch Heavy Production Electric Drills



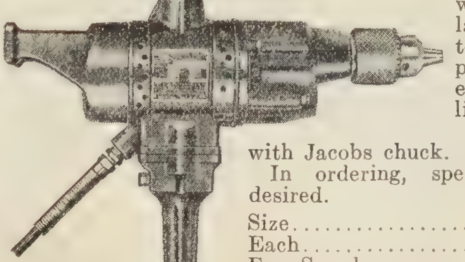
A powerful, sturdy tool. Used mainly in industrial plants and shops where it is necessary to drill all sizes of holes up to and including ⅜ inch.

Equipped with Jacobs chuck.

In ordering, specify voltage desired.

Size		UBD
Each		**$52.00**
Free Speed	r.p.m.	750
Length Over All	inches	**14**
Weight	pounds	9

Thor ⅜-Inch Heavy Production Electric Drills



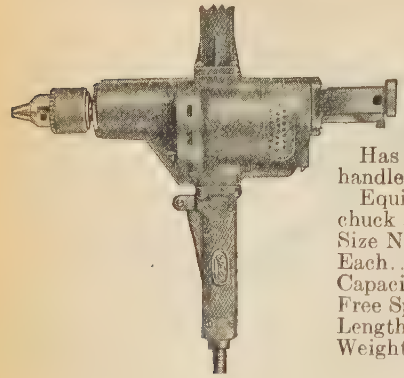
Suitable for drilling deep holes in wood. Recommended for drilling where speed of larger drills is too slow and power of smaller drills is too light.

Equipped with Jacobs chuck.

In ordering, specify voltage desired.

Size		UCE
Each		**$54.00**
Free Speed	r.p.m.	750
Length Over All	inches	15
Weight	pounds	13¾

½-Inch Thor Universal Electric Drills



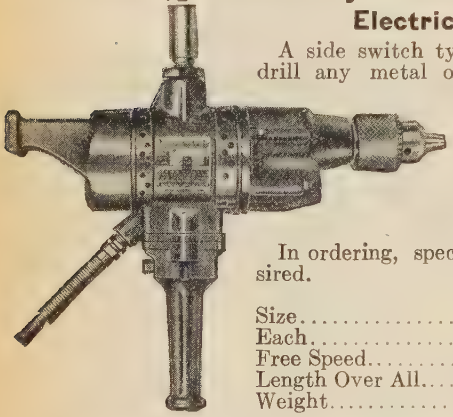
This is a general purpose drill for either maintenance or production work. Especially adapted for use in a drill stand.

Has combination spade handle and breast plate.

Equipped with Jacobs chuck and dead handle.

Size Number	URA
Each	**$55.00**
Capacity ... in.	½
Free Speed ... r.p.m.	500
Length Over All in.	15½
Weight ... lbs.	14½

Thor ½-Inch Heavy Production Electric Drills



A side switch type drill. Will drill any metal or other material up to its capacity.

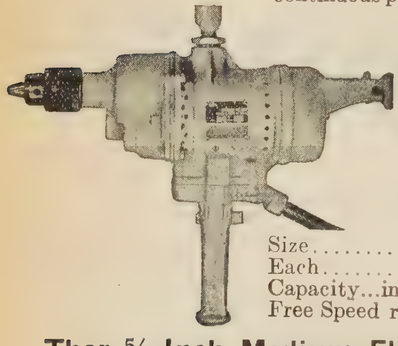
Equipped with Jacobs chuck, spade and dead handles.

In ordering, specify voltage desired.

Size	UCL
Each	**$68.00**
Free Speed ... r.p.m.	550
Length Over All ... inches	15¼
Weight ... pounds	14½

Thor ½ and 9/16-Inch Extra Heavy Production Electric Drills

Exceptionally rugged tools for continuous production drilling.



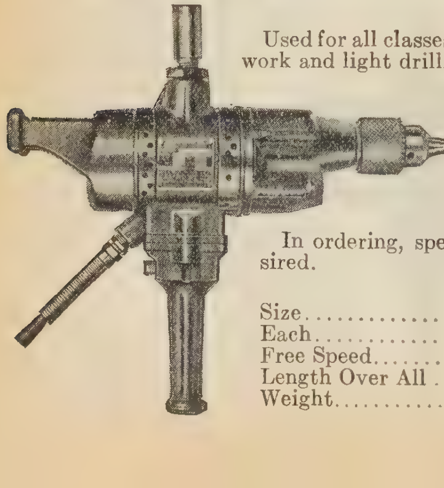
With Jacobs chuck, spade handle, side switch handle and dead handle.

Length over all, 16½ inches. Weight, 20¾ pounds.

Specify voltage when ordering.

Size	UDA	UDB
Each	**$70.00**	**72.00**
Capacity ... in.	½	9/16
Free Speed r.p.m.	650	500

Thor ⅝-Inch Medium Electric Drills



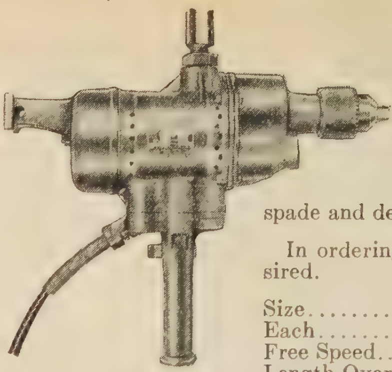
Used for all classes of maintenance work and light drilling.

Equipped with Jacobs chuck, side switch handle, spade handle and dead handle.

In ordering, specify voltage desired.

Size	UCN
Each	**$76.00**
Free Speed ... r.p.m.	550
Length Over All ... inches	15⅜
Weight ... pounds	15½

Thor ⅝-Inch Heavy Electric Drills



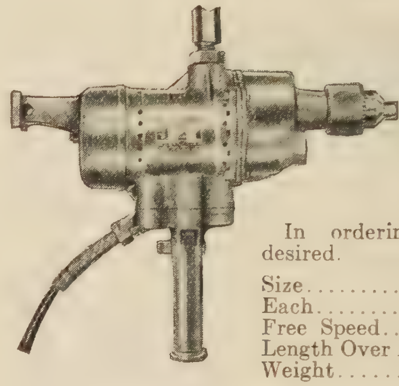
A side heavy duty switch type drill. For drilling and reaming tough materials.

Equipped with either No. 2 Morse Taper Spindle or Jacobs chuck. Has spade and dead handles.

In ordering, specify voltage desired.

Size	UEN
Each	**$85.00**
Free Speed ... r.p.m.	400
Length Over All ... inches	16¾
Weight ... pounds	21½

Thor ¾-Inch Light Electric Drills



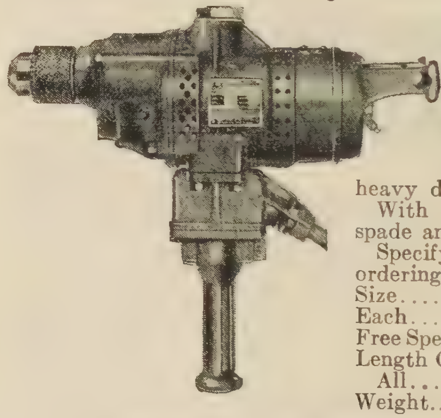
Specially adapted for the hardest kind of service in production shops on a wide variety of work.

Equipped with No. 2 Morse Taper Spindle, spade handle and dead handle. Heavy duty.

In ordering, specify voltage desired.

Size	UES
Each	**$85.00**
Free Speed ... r.p.m.	330
Length Over All ... inches	16¾
Weight ... pounds	22

Thor ¾-Inch Heavy Electric Drills



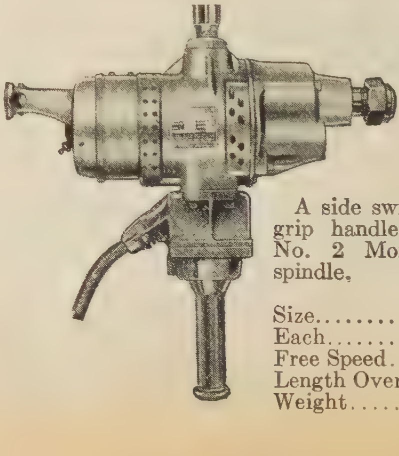
A side switch type drill of extra heavy construction. Suitable for all heavy duty work.

With Jacobs chuck, spade and dead handles.

Specify voltage when ordering.

Size	UFH
Each	**$95.00**
Free Speed. r.p.m.	550
Length Over All ... inches	17
Weight ... pounds	26½

Thor ⅞-Inch Universal Electric Drills

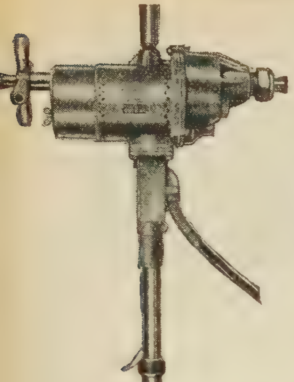


For heavy production work. Used by manufacturers of heavy machinery, in railway shops and in mine and construction work.

A side switch type drill; with grip handle, dead handle and No. 2 Morse Taper internal spindle.

Size	UFS
Each	**$96.00**
Free Speed ... r.p.m.	350
Length Over All ... inches	19½
Weight ... pounds	27¾

Thor 1 and 1¼-Inch Heavy Production Electric Drills



Powerful, sturdy tools for the heaviest type of drilling and reaming.

Equipped with No. 3 Morse Taper spindle, spade and dead handles.

In ordering, specify voltage desired.

Size	UFZ	U3Z
Each	$115.00	150.00
Cap. . . . .in.	1	1¼
Free Speed . . .r.p.m.	350	350
Lgth. Over All. . . .in.	20	19⅞
Wt. . . . .lbs.	29	49½

Thor Electric Drill Stands

Thor Drill Stands quickly convert a portable electric drill into an accurate, sensitive drill press.

No. UD stand is for all Thor Types UD to UE electric drills; No. UC stand is for all Thor Type UC electric drills; No. 8 stand is for all Thor Types UL, UK, UA, UB, UR and UX drills.

Size No.	8	UC	UD
Each	$18.00	28.00	28.00
Vert. Movement . . . .in.	3	6¾	6¾
Adjusted Vertically. . . .in.	9	17½	16¼
Bench Space. .in.	15x9	15x9	15x9
Weight. . . . .lbs.	28	40	40

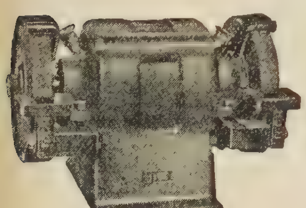
No. U60 Thor Universal Electric Grinders

Equipped with super-power motor, special heat-treated gears, large ball bearings. Carries a 6x1-inch wheel. Furnished with straight switch handle and emery wheel guard.

Size No.	U60
Each	$100.00
Speed, No Load . . . .r.p.m.	4000
Length Over All . . . .in.	25⅜
Weight . . . .lbs.	17

No. BG6 Thor Electric Bench Grinders

110 Volts, 60 Cycles, Single-Phase, A. C.

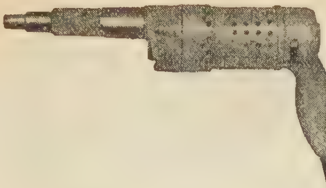


An exceptionally powerful machine designed for 6-inch wheels. Sturdy construction, quiet in operation and free from vibration. Heavy ball bearings on spindle, fully protected from dust and dirt. Extra heavy wheel guards. Tool rests are adjustable and independent from the guards.

Speed, no load, 3600 r.p.m. Size grinding wheels: 6-inch diameter x 1-inch face x ⅝-inch hole. Equipped with switch in base. Cable can be connected to lamp socket. Weight, 40 pounds. Alternating current only.

No. BG6, 110 Volts. . . . . .each **$42.00**

Thor Universal Electric Screwdrivers

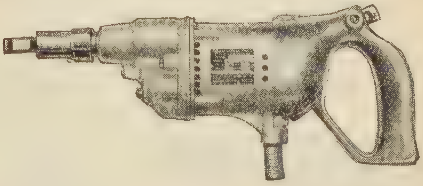


No. ULT for No. 10-24 metal screws. Used for driving small screws and nuts in metal work on radios, phonographs, pianos, automobiles, furniture, etc.

No. ULP for No. 8 wood screws. Designed for cabinet work, radios, aeroplane assembly and automobile trim work. Both types equipped with Thor double slip clutch attachment which can be adjusted to drive screws to any pre-determined tension.

Size No.	ULT	ULP
Each	$48.00	50.00
Free Speed . . . .r.p.m.	900	450
Length Over All . . . .in.	11¼	11¼
Weight . . . .lbs.	3	3

Thor Universal Electric Screwdrivers

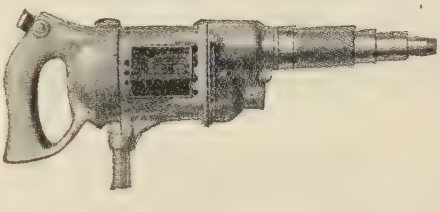


Grip switch type; can be used in all lines of industry that require small screws, cap screws and nuts. Positive Clutch.

Capacity, ¼ inch metal or No. 12 wood screws.

Size No.	UKG	UKH
Each	$54.00	54.00
Free Speed . . . .r.p.m.	750	400
Length Over All . . . .inches	12½	12½
Weight . . . .pounds	5½	5¼
Size of Case to Center of Spindle . . . .in.	15/16	15/16

Thor Universal Electric Screwdrivers



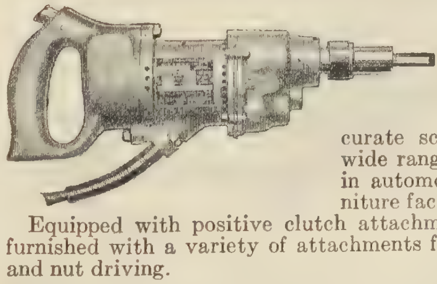
A grip switch type screwdriver for all light screw and nut driving.

Equipped with double clutch friction type screw driving attachment with stationary finder.

Capacity, ¼ inch metal or No. 12 wood screws.

Size	UKP
Each	$64.00
Free Speed . . . .r.p.m.	400
Length Over All . . . .inches	14¾
From Side of Case to Center of Spindle . . . .inches	15/16
Weight . . . .pounds	5¾

Thor Universal Electric Screwdrivers

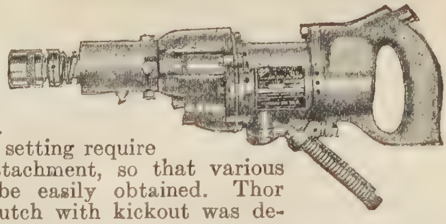


A grip switch screwdriver for Nos. 10 to 16 wood screws. Will do fast, accurate screwdriving on a wide range of work. Used in automotive plants, furniture factories, etc.

Equipped with positive clutch attachment but can be furnished with a variety of attachments for difficult screw and nut driving.

Size	UBG
Each	$68.00
Free Speed . . . .r.p.m.	750
Length Over All . . . .inches	14½
Weight . . . .pounds	8½

Thor ¼-Inch Universal Electric Nut Setters

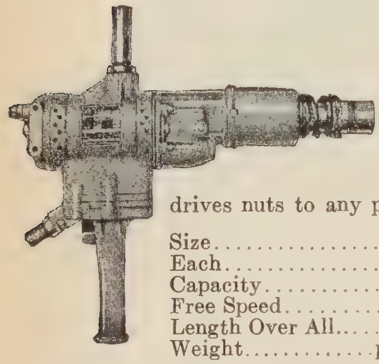


Grip switch type; with No. 140 Thor Kick-Out Nut Driving Attachment.

Nut and bolt setting require elasticity in attachment, so that various tensions may be easily obtained. Thor Double Slip Clutch with kickout was developed for this purpose.

Size		UBGN
Each		**$80.00**
Free Speed	inches	750
Length Over All	inches	18
From Side of Case to Center of Spindle	inches	1$\frac{3}{16}$
Weight	pounds	10¼

Thor Electric Nut Setters for ⅜ and ½-Inch Nuts

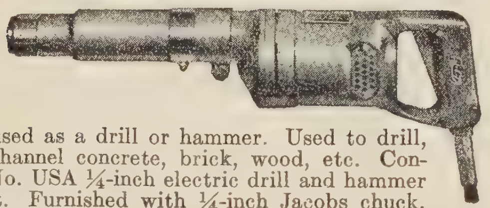


Equipped with suspension cap and hook or grip handle. Has side switch and dead handle.

Has the Thor Double Switch Clutch with kick-out attachment which drives nuts to any pre-determined tension.

Size		UEH	UCH
Each		**$125.00**	**105.00**
Capacity	inches	½	⅜
Free Speed	r.p.m.	550	550
Length Over All	inches	17½	16¼
Weight	pounds	23¼	15½

Thor Universal Electric Hammers

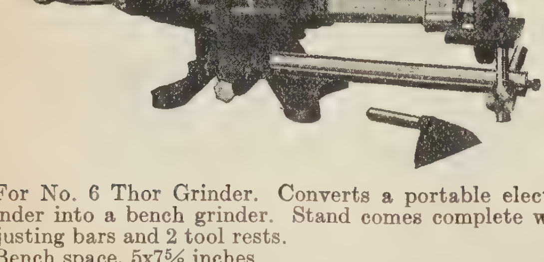


Can be used as a drill or hammer. Used to drill, chip and channel concrete, brick, wood, etc. Consists of a No. USA ¼-inch electric drill and hammer attachment. Furnished with ¼-inch Jacobs chuck, $\frac{9}{16}$-inch Star drill, tool holder, ejector pin and carrying case.

Capacity in concrete per minute: 1-inch hole, 3 inches deep.

Size		USH
Each		**$90.00**
Blows per Minute		3000
Length Over All	inches	18
Weight Complete	pounds	16

Thor Electric Grinder Stands



For No. 6 Thor Grinder. Converts a portable electric grinder into a bench grinder. Stand comes complete with adjusting bars and 2 tool rests.

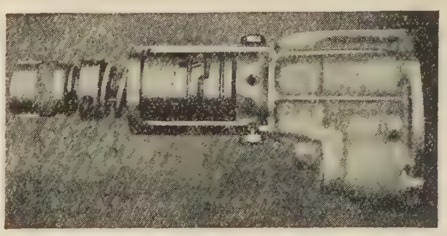
Bench space, 5x7⅝ inches.

Weight, less electric grinder, 10½ pounds.

Each **$15.00**

Thor Double Slip Clutch and Kick-Out Attachments

For Screw and Nut Driving



These Thor features guarantee the correct tightness of every nut or screw driven, assuring 100% uniformity and accuracy in the tension of nuts and screws.

Prevents clutch breakage and wear and can be adjusted for any tension.

Thor Universal Electric Tappers

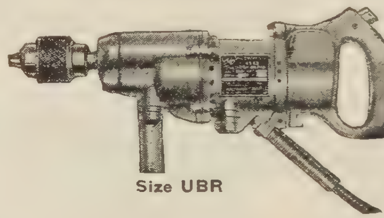
Size UKS

Grip switch type; for tapping or stud driving jobs.

Super-power motors, ball-bearing design, special heat-treated gears, etc.

Tappers have the mechanical reversing feature. A slight pull on the machine disengages the forward speed and engages the reverse speed. Can be equipped with Errington Friction Clutch for bottom tapping, or all makes of ¼-inch stud setting chucks.

Have universal motors; will operate on a.c. or d.c.



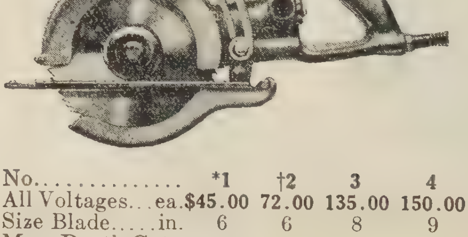
Size UBR

No. UKS is equipped with a $\frac{5}{16}$-inch chuck, No. UBR with a ⅜-inch chuck.

From side of case to center of spindle: No. UKS, 1 inch; No. UBR, 1$\frac{3}{16}$ inches.

Size No.		UKS	UBR
Each		**$68.00**	**85.00**
Capacity	inches	¼	⅜
Free Speed	r.p.m.	460	500
Length Over All	inches	15	16½
Weight	pounds	7½	11½

Thor Portable Electric Saws



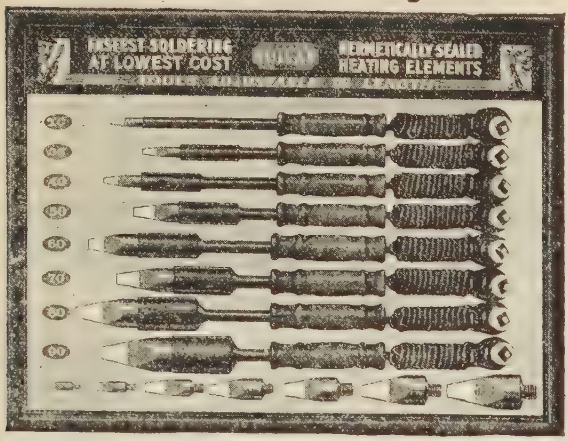
Suitable for either metal or wood sawing.

When ordering specify type of work so that proper blade or disc can be selected.

No.		*1	†2	3	4	5	6
All Voltages	ea.	**$45.00**	**72.00**	**135.00**	**150.00**	**165.00**	**195.00**
Size Blade	in.	6	6	8	9	10	12
Max. Depth Cut in Wood	in.	1⅞	1⅞	2¾	3	3¾	4⅝

*Light duty. †Heavy duty.

Vulcan Electric Soldering Irons



Display Board

These electric soldering irons are approved by Underwriters' Laboratories. Can be connected to any lighting socket and will operate with identical results on either a.c. or d.c.

They are wound for standard voltages as follows: 32, 110, 115, 120, 125, 200, 220, 230, 240 and 250 volts. An extra charge of $1.00 is made for special voltages. Specify voltage when ordering.

Each iron is equipped with a patented, ventilated, adjustable handle, by which it can be lengthened or shortened, and a 6-foot approved heater cord and attachment plug cap.

No. 10 and No. 20

For finest instruments, smallest fuses, light telephone repairs, radio, and all very light soldering.

No. 20 is recommended for industrial use.

No.	Each	Extra Tip Each	Watts	Equal to Old Style Copper Lbs. per Pair	Diam. Tip In.	Wt. Oz.
***10**	**$3.75**	**$.30**	44	1	7/16	10
20	**5.00**	**.30**	50	1	7/16	10

*No. 10 made only in 32–110–115 and 120 volts.

No. 30

For radio and home use, fuses, instruments, inspectors' or linemen's tool kits, etc.

30	**$6.25**	**$.40**	60	1½	½	12

No. 40

For telephone switchboards, electrical instruments, light manufacturing, fuses and radio. High speed tool.

40	**$7.00**	**$.40**	90	2½	½	13½

No. 50

For fast telephone work, art glass, light automobile repairs, light tinware and general home use.

50	**$8.00**	**$.65**	130	3½	7/8	18

No. 60

For light automobile repairs, light tinware, general utility and home use.

60	**$9.25**	**$.90**	175	4½	1	22

No. 70

For medium tinware, general manufacturing, metal patterns and automobile work.

70	**$10.75**	**$1.20**	220	6	1⅛	28

No. 80

For heavy tinware, sheet steel work, metal boat making, refrigerator work and automobile radiator work.

80	**$12.50**	**$1.60**	310	7½	1⅜	37½

No. 90

For heavy sheet metal work, large patterns and all heavy soldering.

90	**$14.50**	**$2.10**	430	10	1⅝	50½

Vulcan Rheostats

Provides more flexible and accurate temperature control in the use of soldering tools. Protects them when not actually delivering their working heat by preventing the unused heat from storing up.

Protects tinning from burning off tip and prolongs life of the winding. Maintains exact degree of temperature required for perfect soldering on any particular job.

For Tool Nos.	Each	For Tool Nos.	Each
10, 20 and 30	**$8.50**	**60, 70 and 80**	**$10.50**
40 and 50	**9.50**	**90**	**12.00**

American Beauty Electric Soldering Irons

No. 3138

All irons except No. 3138 have special baffle-plate construction at shank to prevent free conduction of heat to handles. No. 3138 iron does not need baffle plate.

Copper tips are coated with pure nickel to prevent oxidation and corrosion.

Standard tips regularly supplied. Pointed tips can be supplied in place of chisel tips and vice versa; for No. 3138 iron a special long drawn semi-chisel shaped tip can be furnished in place of standard tip.

No. 3158

Stands are supplied with all irons.

Heating element core is machined from solid steel rod; outer surfaces are impregnated with zinc.

In standard voltage ranges: 100–109, 110–120, 121–130, 190–209, 210–240, 241–260. Will operate on a.c. or d.c. circuits. Can also be supplied for 32 volts.

No. 3138.—Primarily adapted for light work; radio, telephone, telegraph, ignition work, etc.

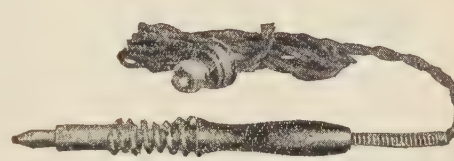
No. 3158.—For the same purposes as No. 3138 iron and for work of a somewhat heavier nature; for electric starter and ignition manufacturers, repair work, etc.

No. 3178.—For use on heavier work; connections, light commutators and for service and production work.

No. 3198.—For shop, service, production work, etc. Supplies a large volume of heat at high temperature.

Cat. No.	Each	Diam. Tip In.	Watts	Over All Inches Lgth.	Over All Inches Diam.	Weight Pounds Net	Weight Pounds Ship.
3138	**$7.20**	3/8	100	12⅞	7/8	1	2
3158	**8.60**	5/8	200	13⅝	1¼	1¾	3
3178	**11.50**	7/8	300	14⅜	1 9/16	2⅝	4
3198	**15.00**	1⅛	550	15	1¾	3¾	5¾

G-E Soldering Irons



Cat. Nos. 43X700 and 43X701

These irons are simple in design and construction. There are only 8 different parts. Copper tip surrounds the cartridge type heating unit and all heat generated must pass through the tip. Copper has high heat conductivity, this means quick heating and low watts input.

Cat. No.	Complete Irons Each	Diam. Tip In.	Watts	Volts	‡Net Wt. Oz.	†Copper Tips Net Wt. Oz.	†Copper Tips Each	Heating Units Symbol	Heating Units Each	Supporting and Radiating Stands Each
For Light Duty										
43X700	**$4.95**	3/8	100	115	15	1	**$.30**	183H	**$2.35**	**$.20**
43X701	**4.95**	3/8	100	230	15	1	**.30**	183X	**2.35**	**.20**
291880	**5.25**	½	75	115	15	3	**.90**	174H	**2.35**	**.20**
291882	**5.25**	½	75	230	15	3	**.90**	174X	**2.35**	**.20**
For Intermittent Duty										
291883	**$5.80**	¾	100	115	16	4	**$.90**	175H	**$2.85**	**$.20**
291885	**5.80**	¾	100	230	16	4	**.90**	175X	**2.85**	**.20**
291886	**6.45**	1	150	115	27	9	**1.20**	176H	**3.20**	**.20**
291888	**6.45**	1	150	230	27	9	**1.20**	176X	**3.20**	**.20**
For Heavy Continuous Duty										
291889	***$9.70**	1	225	115	27	9	**$1.00**	177H	**$3.20**	**$3.00**
291891	*** 9.70**	1	225	230	27	9	**1.00**	177X	**3.20**	**3.00**
291892	***11.70**	1¼	350	115	34	16	**1.50**	178H	**3.50**	**3.80**
291894	***11.70**	1¼	350	230	34	16	**1.50**	178X	**3.50**	**3.80**

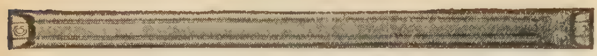
Socket Plug and Heater Cord....................each **$.90**

*Price includes radiating stand.

†Chisel type tips are employed on all sizes.

‡Excluding stand.

G-E Strip Heaters



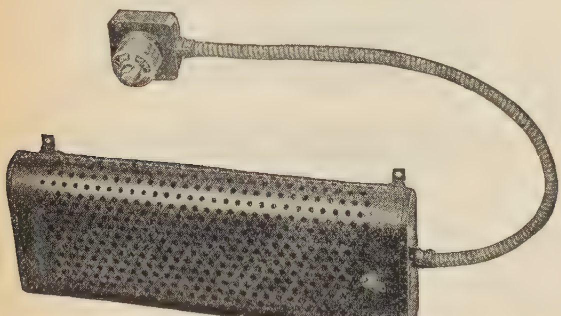
Serves the double purpose of air heater and clamp-on heater. A few of the common applications are for: process machinery, drying ovens, matrix scorchers, warming tables, glue tables, water baths, drying cabinets, valve and pump houses, pipe lines, etc. Made of steel-sheath, enclosing nickel-chromium resistance wire insulated by magnesium-oxide powder. Heater is 25/64 inch thick and 1½ inches wide. Sheath temperatures, 750° F. or 1200° F. Can be connected in series for use on 440 or 550-volt circuits. For these higher voltages, secondary insulation is recommended, especially at sheath temperatures above 600° F.

Maximum Sheath Temperature, 750° F.

Order by Cat. No.

Cat. Nos. Terminals at One End	Cat. Nos. Terminals at Both Ends	Each	Watts	Volts	Length Inches	Approx. Ship. Wt. Lbs.
63X527	....	$3.25	1000	230	35½	3
63X526	....	2.75	750	230	30⅛	3
51X340	51X348	2.25	500	115	23½	2
51X341	51X349	2.25	500	230	23½	2
51X338	51X346	2.10	350	115	17⅝	2
51X339	51X347	2.10	350	230	17⅝	2
51X336	51X344	1.90	250	115	11¾	2
51X337	51X345	1.90	250	230	11¾	2
51X334	51X342	1.80	150	115	7	1
51X335	....	1.80	150	230	7	1
Maximum Sheath Temperature, 1200° F.						
63X529	....	$5.00	1500	230	35½	3
63X528	....	4.40	1000	230	30⅛	3
45X915	45X923	3.80	750	115	23½	2
45X916	45X924	3.80	750	230	23½	2
45X913	45X921	3.30	500	115	17⅝	2
45X914	45X922	3.30	500	230	17⅝	2
45X911	45X919	2.90	350	115	11¾	2
45X912	45X920	2.90	350	230	11¾	2
45X909	45X917	2.60	200	115	7	1
45X910	....	2.60	200	230	7	1

G-E Horizontal Industrial Air Heaters



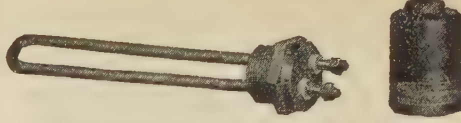
For heating garages, ticket booths, pump houses, etc. Temperature may be controlled within 1 or 2 degrees F. if used in conjunction with G-E Automatic Temperature Control. Consists of a number of strip heaters mounted in black japanned, perforated pressed steel case, 25⅝ inches long, with proper mounting, 3-foot armored cable and 3-heat snap switch.

Wall Mounted

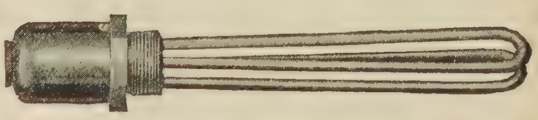
Cat. No.	Each	Watts	Volts	Lgth. Over All In.	Distance Bet. Supporting Screws, In.	Wdth. In.	Ship. Wt. Lbs.
50X14	$20.00	1000	115	7¾	8⅝	3⅝	20
50X15	20.00	1000	230	7¾	8⅝	3⅝	20
50X13	27.00	2000	*230	10 7/16	11⅜	3⅝	25
50X7	34.00	3000	*230	14¼	15⅛	3⅝	30
50X5	45.00	4500	*230	14¼	15⅛	3⅝	35
Floor Mounted							
54X146	$20.00	1000	115	†7¾	10¾	3⅝	20
54X147	20.00	1000	230	†7¾	10¾	3⅝	20
54X149	27.00	2000	*230	†10 7/16	13 7/16	3⅝	25
54X151	34.00	3000	*230	†14¼	17¼	3⅝	30
54X153	45.00	4500	*230	†14¼	17¼	3⅝	35

*115-volt heaters are also available. †Height over all.

G-E Immersion Heaters



Single Heat, .75 and 1 Kw.



3 Heats, 1.2 to 10 Kw.

Single Heat, .6 Kw.

3 Heats, 2 Kw.

These heaters offer an economical method of heating liquids in kettles, tanks, metal barrels, etc. They are substantially constructed, utilizing G-E Calrod Sheath Wire.

For heating water, a tinned copper-sheathed unit of high heat density and having a threaded brass header is used. For heating heavier liquids, such as oil and paraffin, a heater having a much lower watts density is used because of possible damage to such liquids and to the heaters caused by carbonization, etc. Steel is used as the sheath and header material in oil-immersion heaters.

For Water Immersion

Cat. No.	Each	No. Heats	Max. Demand Kw.	Volts	Lgth. from End of Unit to Nut on Threaded Collar In.	*Diam. Threaded Collar In.	Lgth. Over All In.	Approx. Ship. Wt. Lbs.
15X820	$7.90	1	.6	115	5	1¼	8½	2
15X821	7.90	1	.6	230	5	1¼	8½	2
15X822	8.40	1	.75	115	8	1¼	11½	2
15X823	8.40	1	.75	230	8	1¼	11½	2
15X824	9.30	1	1.0	115	10	1¼	13½	2
15X825	9.30	1	1.0	230	10	1¼	13½	2
15X826	11.70	3	1.2	115	8	1¼	11½	3
15X827	11.70	3	1.2	230	8	1¼	11½	3
15X828	13.60	3	2.0	115	10	1¼	13½	3½
15X829	13.60	3	2.0	230	10	1¼	13½	3½
15X830	16.00	3	2.0	115	1⅛	‡1⅝	4½	3½
15X831	16.00	3	2.0	230	1⅛	‡1⅝	4½	3½
15X832	16.00	3	3.0	115	14	2	18	6
†15X833	16.00	3	3.0	230	14	2	18	6
15X834	18.40	3	4.0	115	18	2	22	7
†15X835	18.40	3	4.0	230	18	2	22	7
15X836	20.90	3	5.0	115	22	2	26	8
†15X837	20.90	3	5.0	230	22	2	26	8
†50X595	26.80	3	7.5	230	30	2	34	11
†14X426	33.00	3	10.0	230	42	2	46	14
For Oil Immersion								
33X825	$13.60	3	1.0	115	10	1¼	13½	5
33X826	13.60	3	1.0	230	10	1¼	13½	5
32X820	16.00	3	1.5	115	14	2	18	6
†32X821	16.00	3	1.5	230	14	2	18	6
32X822	18.40	3	2.0	115	18	2	22	7
†32X823	18.40	3	2.0	230	18	2	22	7
15X838	20.70	3	2.5	115	22	2	26	8
†15X839	20.70	3	2.5	230	22	2	26	8
32X824	23.00	3	3.0	115	26	2	30	10
†32X825	23.00	3	3.0	230	26	2	30	10
32X826	27.70	3	4.0	115	36	2	40	12
†32X827	27.70	3	4.0	230	36	2	40	12
32X828	32.30	3	5.0	115	42	2	46	14
†32X829	32.30	3	5.0	230	42	2	46	14

*Diameter is standard pipe thread of size given.

†For operation on 230-volt circuit; can be operated single heat on a 440-volt circuit by running two elements in series. Switches listed should not be used on circuits over 250 volts.

‡Straight thread—not pipe thread.

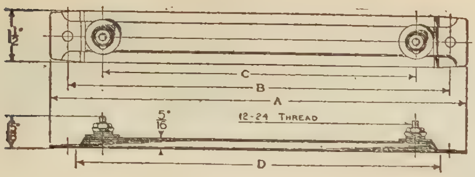
Snap Switches for Hand Control—250 Volts Maximum

Cat. No.	Each	No. Heats	For Heaters Cat. Nos.
60451	$.83	Sgl.	15X820 to 15X825
29X924	1.40	3	15X826 and 15X827 33X825, 33X826, 32X820, 32X821
278607	2.10	3	15X828 to 15X832 32X822 to 32X824, 15X838, 15X839
278610	4.34	3	15X833 to 15X837, 32X825 to 32X829

Type S Chromalox Electric Strip Heaters

With One Bolt Terminal at Each End

For 115 or 230 Volts



Dimensions

Size In.	Dimen., In. A	B	C	D	Size In.	Dimen., In. A	B	C	D
8	8	7	5	6½	**24**	23¾	22¾	20¾	22¼
9½	9½	8½	6½	8	**25½**	25½	24½	22½	24
12	12	11	9	10½	**26¾**	26¾	25¾	23¾	25¼
14	14	13	11	12½	**30½**	30½	29⅜	26½	28
15¼	15¼	14¼	12¼	13¾	**33½**	33½	32⅜	29½	31
18	17⅞	16⅞	14⅞	16⅜	**36**	36	34¾	31⅞	33½
19½	19½	18½	16½	18	**43**	42⅝	41⅜	38½	40⅛
21	21	20	18	19½	....	....	....	....	....

Dimension D indicates over all length of Type 5 heaters.

Maximum Sheath Temperature 750° F.

(Sheath of Rust-Resisting Iron)

Cat. No.	Each	Over All Length Inches *Standard	†Type 5	Watts
S-815	$1.80	8	6½	150
S-920	1.85	9½	8	200
S-1225	1.90	12	10½	250
S-1430	2.00	14	12½	300
S-1532	2.05	15¼	13¾	325
S-1837	2.10	18	16⅜	375
S-1850	2.10	18	16⅜	500
S-1950	2.15	19½	18	500
S-2050	2.20	21	19½	500
S-2425	2.25	24	22½	250
‡S-2450	2.25	24	22½	500
S-2575	2.40	25½	24	750
S-2670	2.45	26¾	25¼	700
S-3075	2.80	30½	28	750
S-3375	3.05	33½	31	750
S-3610	3.25	36	33½	1000
S-4312	3.85	43	40	1250

Maximum Sheath Temperature 1200° F.

(Sheath of Heat-Resisting Chrome Steel)

Cat. No.	Each	*Standard	†Type 5	Watts
S-802	$2.60	8	6½	250
S-903	2.75	9½	8	300
S-1205	2.90	12	10½	500
S-1405	3.05	14	12½	500
S-1505	3.10	15¼	13¾	500
S-1805	3.30	18	16⅜	500
S-1807	3.35	18	16⅜	750
S-1801	3.40	18	16⅜	1000
S-1905	3.40	19½	18	500
S-1901	3.50	19½	18	1000
S-2005	3.50	21	19½	500
S-2405	3.70	24	22½	500
S-2407	3.70	24	22½	750
S-2401	3.80	24	22½	1000
S-2415	4.00	24	22½	1500
S-2501	3.90	25½	24	1000
S-2607	4.00	26¾	25¼	750
S-3007	4.40	30½	28	750
S-3301	4.75	33½	31	1000
S-3601	5.00	36	33½	1000
S-4301	5.75	43	40	1500

*Standard type has fastening tabs at each end with slotted mounting holes 5/16 inch wide by ½ inch long for bolting to supports.

†Type 5 (blunt end) has fastening tabs cut off about ¾ or 1¼ inches depending on over all length from each end for clamp-on applications.

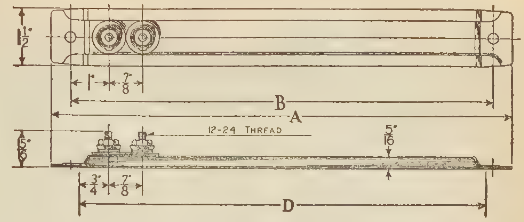
‡Also 250 volts.

When ordering specify if Type 5 is desired, also Cat. No. and voltage.

Type SE Chromalox Electric Strip Heaters

With 2 Bolt Terminals at One End

For 115 and 230 Volts



Dimensions

Size In.	Dimen., In. A	B	D	Size In.	Dimen., In. A	B	D
8	8	7	6½	**24**	23¾	22¾	22¼
10½	10½	9½	9	**25½**	25½	24½	24
12	12	11	10½	**26¾**	26¾	25¾	25¼
14	14	13	12½	**30½**	30½	23⅜	28
15¼	15¼	14¼	13¾	**33½**	33½	32⅜	31
18	17⅞	16⅞	16⅜	**38½**	38½	37⅜	36
19½	19½	18½	18	**43**	42⅝	41⅜	40⅛
21	21	20	19½	....	....	....	....

Dimension D indicates over all length of Type 5 heaters.

Maximum Sheath Temperature 750° F.

(Sheath of Rust-Resisting Iron)

Cat. No.	Each	Over All Length Inches *Standard	†Type 5	Watts
SE-815	$1.80	8	6½	150
SE-1025	1.85	10½	9	250
SE-1225	1.90	12	10½	250
SE-1430	2.00	14	12½	300
SE-1532	2.05	15¼	13¾	325
SE-1835	2.10	18	16⅜	350
SE-1850	2.10	18	16⅜	500
SE-1935	2.15	19½	18	350
SE-1950	2.15	19½	18	500
SE-2050	2.20	21	19½	500
SE-2450	2.25	24	22½	500
SE-2475	2.30	24	22½	750
SE-2550	2.35	25½	24	500
SE-2575	2.40	25½	24	750
SE-2670	2.45	26¾	25¼	700
SE-3075	2.80	30½	28	750
SE-3375	3.05	33½	31	750
SE-3610	3.25	36	33½	1000
SE-3880	3.45	38½	36	800
SE-3810	3.50	38½	36	1000
SE-4312	3.85	43	40	1250

Maximum Sheath Temperature 1200° F

(Sheath of Heat-Resisting Chrome Steel)

Cat. No.	Each	*Standard	†Type 5	Watts
SE-802	$2.60	8	6½	250
SE-1003	2.80	10½	9	350
SE-1205	2.90	12	10½	500
SE-1405	3.05	14	12½	500
SE-1505	3.10	15¼	13¾	500
SE-1805	3.30	18	16⅜	500
SE-1807	3.35	18	16⅜	750
SE-1801	3.40	18	16⅜	1000
SE-1905	3.40	19½	18	500
SE-1901	3.50	19½	18	1000
SE-2007	3.50	21	19½	750
SE-2405	3.70	24	22½	500
SE-2407	3.70	24	22½	750
SE-2401	3.80	24	22½	1000
SE-2507	3.85	25½	24	750
SE-2501	3.90	25½	24	1000
SE-2601	4.00	26¾	25¼	1000
SE-3007	4.40	30½	28	750
SE-3307	4.75	33½	31	750
SE-3801	5.25	38½	36	1000
SE-4301	5.75	43	40	1500

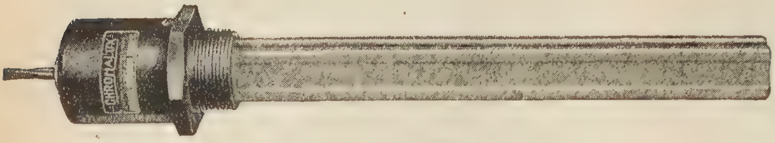
*Standard type has fastening tabs at each end with slotted mounting holes 5/16 inch wide by ½ inch long for bolting to supports.

†Type 5 (blunt end) has fastening tabs cut off about ¾ or 1¼ inches depending on over all length from each end for clamp-on applications.

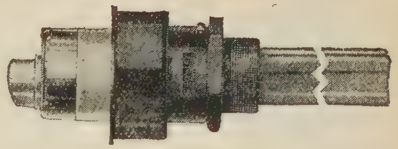
When ordering specify if Type 5 is desired, also Cat. No. and voltage.

Chromalox Immersion Heaters

Types M, MO, CM and CMO



Type M or MO



Type CM or CMO with Switch and Outlet Box

USES.—Because of their efficiency, Chromalox Immersion Heaters supply the most economical method for heating fluids in tanks, vats, kettles, boilers, stills and other containers where direct heat energy is desirable. Hundreds of companies are using these durable heaters for heating cleaning solutions, volatile solutions, tempering baths, pickling baths, water, oils, acids, glues, paraffin, syrups, gasoline, caustics and other fluids.

CONSTRUCTION.—All Chromalox Immersion Heater blades or heating units proper are similar in construction to Chromalox Strip Heaters having the resistor embedded in refractory material. The heating units are encased in seamless metal tubing or sheath pressed tightly over them, the seamless sheath being welded or brazed to the pipe threaded screw plug making entire unit waterproof and insuring efficient heat transfer.

OPERATION.—Single heat heaters have one blade or heating unit while 3-heat immersion heaters have two blades or heating units that can be operated in parallel or series giving full or ¼ total wattage; operating only one blade or unit of a heater gives ½ total wattage. A 440-volt operation, single heat, can be obtained by connecting the two blades or heating units of a 3-heat, 230-volt immersion heater in series. A 3-heat, 115-volt immersion will operate with the two blades in series on 230 volts.

INSTALLATION.—Chromalox Immersion Heaters are easily installed. Where tank wall is ⅜ inch thick or more, simply drill a hole and thread it with either 1¼ or 2-inch standard pipe thread, depending upon what immersion heater is used. If tank wall is less than ⅜-inch thick, solder or weld a standard 1¼ or 2-inch pipe threaded flange or metal disc to tank wall and install immersion heater.

Types of Heaters

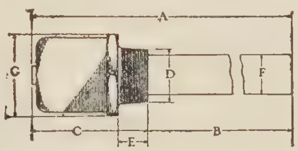
TYPE M.—For water heating and solutions that readily absorb generated heat. Regularly supplied with copper sheath and bronze screw plug. *For alkali solutions* where copper is attacked, steel sheath, iron screw plug and welded seam construction is supplied—when specified.

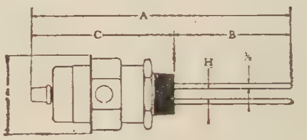
TYPE CM.—Same as Type M except furnished with 3-heat switch mounted on outlet box which covers heater terminals, providing for conduit or BX wiring if desired.

TYPE MO.—For heating mineral oils, paraffin and other fluids that absorb heat slowly. Supplied with steel sheath, iron screw plug, and brazed seams. Can be furnished with copper sheath and bronze screw plug where steel would be attacked.

TYPE CMO.—Same as Type MO except furnished with 3-heat switch mounted on outlet box, which covers heater terminals, providing for conduit or BX wiring if desired.

NOTE.—If solution to be heated will attack the standard immersion heater construction, special seamless metal sheathed heaters can be furnished. Write for prices specifying type of solution.





For Water Heating—Copper Sheath

				TYPES M and MO Without Hand Control Switch				TYPES CM and CMO With Hand Control Switch and Outlet Box Mounted on Heater			
Watts	Volts	Heats	Std. Pipe Thrd. In.	Cat. No.	Each	A Approx. Over All Length Inches	Heated or Blade Length Inches	Cat. No.	Each	A Approx. Over All Length Inches	B Heated or Blade Length Inches
500	115 or 230	1	1¼	M-150	$7.50	10¼	6	CM-150	$8.50	13¼	6
750	115 or 230	1	1¼	M-175	8.40	13¼	8¾	CM-175	9.40	16	8¾
1000	115 or 230	1	1¼	M-110	9.30	14¾	10¼	CM-110	10.65	17½	10¼
1000	115 or 230	3	1¼	M-110-3	11.70	10¼	6	CM-110-3	13.05	13¼	6
1500	115 or 230	3	1¼	M-115	12.40	13¼	8¾	CM-115	13.80	16	8¾
2000	115 or 230	3	1¼	M-120	13.60	14¾	10¼	CM-120	15.50	17½	10¼
1500	115 or 230	1	2	M-215	11.00	19½	14½	CM-215	12.50	22	14½
2000	115 or 230	1	2	M-220	12.70	25	20½	CM-220	14.60	27¾	20½
2000	115 or 230	3	2	M-220-3	13.60	14¾	10¼	CM-220-3	15.50	17¾	10¼
2500	115 or 230	3	2	M-225	14.80	17¼	13	CM-225	16.70	20¼	13
3000	115 or 230	3	2	M-230-3	16.00	19	14½	CM-230-3	18.00	22	14½
4000	115 or 230	3	2	M-240	18.40	25	20½	CM-240	22.75	27¾	20½
5000	115 or 230	3	2	M-250	20.90	27	22½	CM-250	25 25	30	22½
6000	230 Only	3	2	M-260	23.30	36½	32	CM-260	27.65	39¼	32
10000	230 Only	3	2	M-201	33.00	50	45	....	.....	...	....
For Oil Heating—Steel Sheath											
1000	115 or 230	3	1¼	MO-110	$13.60	13¼	8¾	CMO-110	$14.95	16	8¾
1500	115 or 230	3	2	MO-215	16.00	17¼	13	CMO-215	17.40	20¼	13
2000	115 or 230	3	2	MO-220	18.40	22	17½	CMO-220	19.80	25	17½
2500	115 or 230	3	2	MO-225	20.70	25	20½	CMO-225	22.60	27¾	20½
3000	115 or 230	3	2	MO-230	23.00	29	24½	CMO-230	25.00	31¾	24½
4000	115 or 230	3	2	MO-240	27.70	36½	32	CMO-240	32.05	40	32
5000	115 or 230	3	2	MO-250	32.30	45	40	CMO-250	36.65	48	40
6000	230 Only	3	2	MO-260	37.00	50	45	CMO-260	41.35	53	45

Specify voltage when ordering.

Type H Chromalox Electric Air Heaters

Underwriters' Laboratories Approval No. 7601

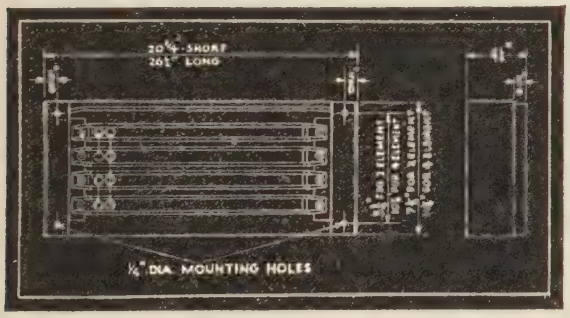
For 115, 230, 250, 440 and 550 Volts

Exterior View of Heater Equipped with 2 Chromalox Units

Designed for those many hard-to-heat places where heat must be concentrated near the floor. Ideal for mounting underneath low windows—the most effective location for electric air heaters. This heater is ideal for use in offices and shops.

Interior View of Heater Equipped with 4 Chromalox Units Showing 3-Heat Switch and Conduit Box Mounted on End of Heater

Heater discharges heated air horizontally into the room where it is needed (not up to the ceiling), thereby providing even heat distribution and eliminating the usual "hot spots" and "cold corners". Mounting side (back part) is always cool, therefore this heater can be fastened to wall or wooden partition without fire hazard.



Showing Over All Dimensions of Heater

Fully Assembled with 3 Feet of Flexible Cable and 3-Heat Switch Mounted on Standard Conduit Box Ready to Connect to Power Line

Cat. No.	Complete Each	Without Switch or Cable Each	No. of Units	Over All Length Inches	Wattage
EH-1801	$20.00	$17.00	2	20¾	1000
EH-2405	23.50	20.50	2	26¾	1500
*EH-2406	27.00	23.00	4	26¾	2000
*EH-2407	34.00	29.00	4	26¾	3000

With 3-Heat Switch and Conduit Box Mounted on End of Heater

EH-S-1801	$20.00	.....	2	†25	1000
EH-S-2405	23.50	.....	2	†30	1500
*EH-S-2406	27.00	.....	4	†30	2000
*EH-S-2407	34.00	.....	4	†30	3000

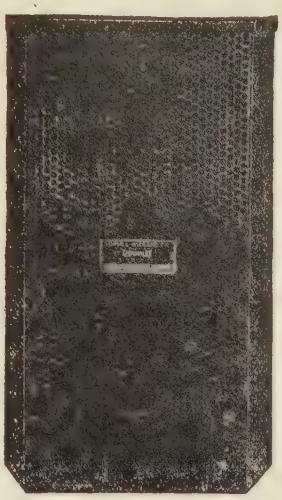
*Can be supplied for 3-heat operation on 440 or 550 volts. All other air heaters listed above can be supplied for single-heat operation on 440 or 550 volts. For 3-heat switch (440-550 volts) add $4.00 to above prices.

†Including switch.

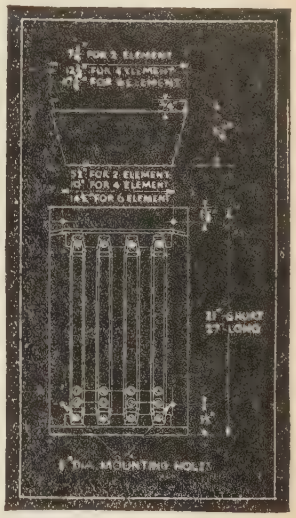
Chromalox Electric Air Heaters

Underwriters' Laboratories Approval No. 7601

Type V—For 115, 230, 250, 440 and 550 Volts



Exterior View of Heater Equipped with 4 Chromalox Units



Showing Over All Dimensions of Heater

This heater is easily mounted on walls or wooden partitions without fire hazard.

Fully assembled with 3 feet of flexible cable and 3-heat switch mounted on standard conduit box ready to connect to power line.

Cat. No.	Complete Each	Without Switch or Cable Each	No. of Units	Over All Height Inches	Wattage
EH-1010	$20.00	$17.00	2	21	1000
*EH-1020	27.00	23.00	4	21	2000
EH-2015	23.50	20.50	2	27	1500
*EH-2020	27.00	23.00	4	27	2000
*EH-2030	34.00	29.00	4	27	3000
†*EH-2040	45.00	39.00	6	27	4500

*Can be supplied for 3-heat operation on 440 or 550 volts. All other heaters listed can be supplied for single-heat operation on 440 or 550 volts. For 3-heat switch (440-550 volts) add $4.00 to above prices.

†The 4500-watt (4.5 kw.) heater can be supplied on order for 3-phase, 2-phase or single-phase operation and the load will be evenly balanced on each phase. If greater heating capacity is required than is supplied by a 4.5 kw. heater, mount two or more heaters side by side and thus secure the necessary total kw. of heater capacity.

Type P—For 115, 230 and 250 Volts

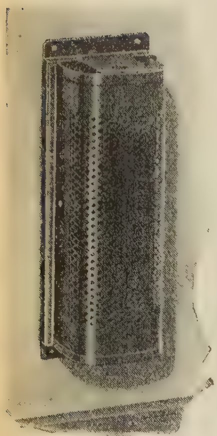
This heater is doubly useful because it meets the frequent requirements calling for a heater that can be quickly moved from one place to another.

Cat. No.	Each	No. of Units	Over All Ht. In.	Wattage
EH-1810	$20.00	2	22	1000
EH-1820	27.00	4	22	2000
EH-2415	23.50	2	28	1500
EH-2420	27.00	4	28	2000
EH-2430	34.00	4	28	3000

Type HV Chromalox Electric Air Heaters

Underwriters' Laboratories Approval No. 7601

For 115, 230 and 250 Volts

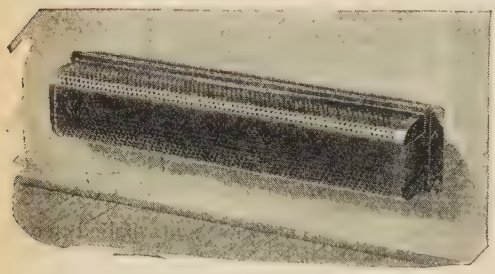


Showing Heater Mounted Vertically on Wall Near Floor

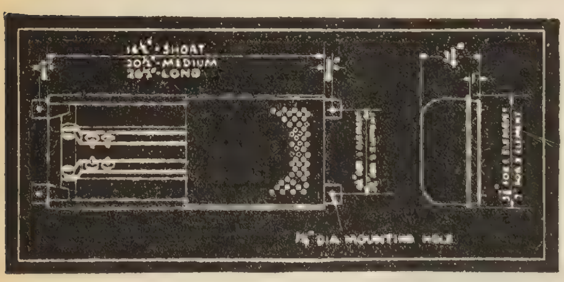
This inexpensive Chromalox auxiliary type heater is being widely adopted by chain stores, telephone companies, etc., for heating small places requiring equipment having the Underwriters' approval. Also being installed in ticket booths, valve houses, fire extinguisher houses, etc., where safe, fumeless, clean heat is a necessity and economy is a factor.

Can be mounted in any position—on walls, floors or ceilings of the space to be heated. Because of the low wattage rating, heater is not equipped with switch, but is shipped from stock ready for direct connection to the power line. If a switch is required, it can be supplied at a nominal additional charge. The low wattage also eliminates the necessity of the patented flue-back, making it possible to supply these heaters at a low price.

Heater is furnished complete with 6 feet of heater cord and attachment plug.



Showing Heater Mounted on Wall Near Floor



Showing Over All Dimensions of Heater

Cat. No.	Each	No. of Units	Over All Dimen., In. Length	Width	Depth	Wattage
EH-122	$10.00	1	14½	5⅞	4	250
EH-183	11.00	1	20½	5⅞	4	375
EH-245	12.00	1	26½	5⅞	4	500
EH-125	12.00	2	14½	7	4	500
EH-187	14.00	2	20½	7	4	750
EH-241	15.00	2	26½	7	4	1000

American Beauty Electric Glue Pots

Automatic Temperature Control

Nos. 1041, 1042, 1044

Pails are equipped with reversible wiping bails.

Complete with cord, separable connector and attachment plug.

Constructed of aluminum alloy castings with heavy spun seamless copper, nickeled, glue containers.

Outer enclosing casings of heavy sheet steel.

Made in the following standard voltage ranges: 95-104, 105-114, 115-125, 190-209, 210-229, 230-250.

Can be used on either d.c. or a.c. circuits.

Water-Jacketed Type With Water Bath

In this type the glue pail is immersed in a water bath and the contents thus heated.

Cat. No.	Each	Cap. Qts.	Over All Dimen. Inches Height	Max. Diam.	Inside Dimen. Inches Top	Bottom	Depth	Wattage	Approx. Ship. Wt. Lbs.
1041	$27.50	1	6⅜	8¼	4¾	4¼	4	440	12
1042	34.00	2	7¾	10	5¾	5½	5⅜	660	18
1044	54.00	4	10½	12⅜	7	6¼	7	880	30

Dry Type No Water Bath

The glue is put directly into the cast aluminum pot.

Separate glue pails to fit into the pot can be furnished if desired.

141	$21.00	1	6½	7¾	4⅞	4	4⅛	250	10
142	26.50	2	8⅝	8¾	6	5	5½	350	14
144	37.00	4	10	10	7	6¼	7	660	25

G-E Electric Glue Pots

Furnished in two types.

The jacketless type has no water jacket and is used for continuous operation; single heat, 145° F. maximum temperature, using aluminum pot for quick heat distribution and prevention of glue sticking to side walls.

The water-jacketed type has 3 heats and is used for quick intermittent service. Water jacket is of cast iron and pot of copper to which glue will not stick.

The 115-volt pot operates satisfactorily on voltages from 110 to 120; the 230-volt pot on from 220 to 240 volts.

Order by Cat. No. and voltage.

Jacketless (Single Heat)

With contact plug, 8-foot cable, socket attaching plug.

Cat. No.	Each	Cap. Qts.	Volts	Watts	O.D., In. Ht.	Diam.	Ship. Wt. Lbs.
269853	$16.00	1	115	70	6$\frac{1}{16}$	6	4¾
269855	16.00	1	230	70	6$\frac{1}{16}$	6	4¾
259989	18.00	2	115	90	7¼	7	5½
259991	18.00	2	230	90	7¼	7	5½
259994	21.00	4	115	140	9⅛	8$\frac{5}{16}$	7⅜
259996	21.00	4	230	140	9⅛	8$\frac{5}{16}$	7⅜

Water-Jacketed (3 Heats)

With contact plug, 8-foot cable, 3-heat plug on cable.

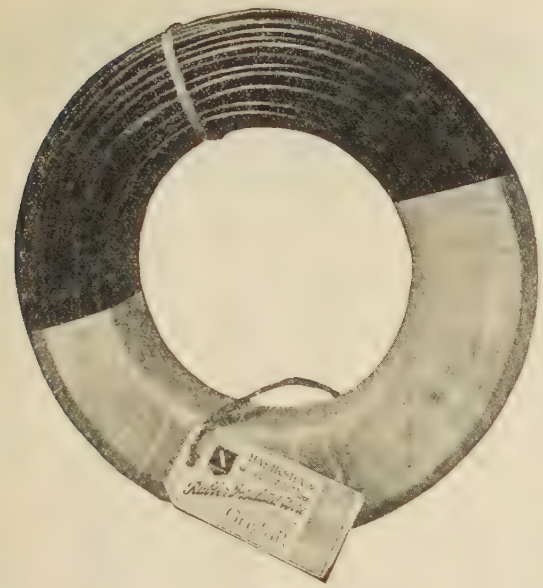
Cat. No.	Each Complete	Each Less Cover	Cap. Qts.	Volts	Watts Low Heat	Med. Heat	High Heat	O.D. In. Ht.	Diam.	Ship. Wt. Lbs.
*280486	$18.00	$15.25	1	115	75	150	300	6¼	7¼	25
*280487	18.00	15.25	1	230	75	150	300	6¼	7¼	25
†280488	20.00	17.25	2	115	115	230	460	8¼	8¼	28
†280489	20.00	17.25	2	230	115	230	460	8¼	8¼	28
‡280490	24.00	21.75	4	115	165	330	660	8½	11	40
‡280491	24.00	21.75	4	230	175	330	660	8½	11	40

Average time required to heat from 70° F. to 145° F. on high heat: *45 minutes; †40 minutes; ‡60 minutes.

Average constant temperature in pot at low heat, 145° F.

Bare and Insulated Wires

General Information



Stocks

We carry at our various distributing houses large stocks of wire and cables, which, in addition to the large reserve stock carried by the manufacturers from whom we buy, gives this company a unique and comprehensive assortment. We handle thousands of types of wires, bare and insulated, suitable for general purposes, and, of course, in addition, special wires and cables for aerial, underground, submarine, mine, signal, telephone, and telegraph service.

Factory Facilities

Factory facilities for the manufacture of rubber covered wires and cables have been continually improved, so that to-day the Graybar Electric Company is in a position to offer its customers unsurpassed facilities for the production of rubber insulated wires, and we are as well able to have produced promptly special wires and cables such as are used by the railroads, the mines and the United States Government.

Price and Quality

The Graybar Electric Company sells its wires and cables at prices consistent with the quality of material used, and our customers will find that we are in line with other manufacturers producing high grade wire.

Special Wires

Although the foregoing refers principally to the standard types of rubber covered wire, the same holds good to other classes of insulated wire handled by the Graybar Electric Company. We are in a position to furnish not only material from a large stock of wires and cables, which meet these ordinary specifications, and from which shipment can usually be made as soon as order is received, but we also have exceptional facilities for executing promptly all orders for emergency or special cables even of the most complicated construction.

Service

Our distributing houses are so well located and our stocks are so large that we are able to give customers service of a quality that cannot be exceeded by any of our competitors in any part of the country, and salesmen can unhesitatingly assure their customers that all stock of Graybar Electric wire receives the most careful scrutiny and inspection by men experienced in that line of work.

Habirshaw Wire and Cable

Insulation

Habirshaw wires and cables, distributed by the Graybar Electric Co. are insulated with rubber or varnished cambric. The various types of insulation are briefly described below.

Black Core Code Grade Compound

Habirshaw Code Compound is a standard compound and, although designed primarily to meet the minimum requirements of the National Electrical Code, it possesses superior electrical, mechanical and chemical properties. Its quality and uniformity are carefully controlled by rigid inspection.

Engineers Intermediate Grade Compound

Habirshaw Engineers' Grade Compound is an intermediate type, that is, it contains not less than 25 per cent rubber and comes between the Code and Thirty Per Cent grades of insulation. It conforms to the N.E.M.A. Building Wire Specification for Intermediate Insulation. This compound has remarkable natural aging properties and is a satisfactory insulation for use in high-grade building construction where an inexpensive insulation of better than Code grade is required.

Thirty-Per-Cent Hevea Compounds

Habirshaw 30 per cent Hevea compounds contain not less than 30 per cent of the best grade of new Hevea rubber, carefully compounded. Thirty Per Cent insulation is made in two grades.

1. ASTM-D-27-32-T, Grade A (N.E.M.A. Standard).
2. ASTM-D-27-32-T, Grade AO.

Grade A compound is one not permitting the use of an Anti-oxident, and has no aging performance requirement.

Grade AO compound is one requiring the use of Anti-oxident to meet specified aging performance tests.

Performance Test Compound

Habirshaw Performance type of rubber insulation is a high grade insulation having long life, good electrical and physical properties as well as low water absorption. This insulation conforms to the N.E.M.A. Building Wire Specification for Performance Test Insulation and also to A.S.T.M. Specification D-353-33T for Performance Rubber Compound.

The suitability of this type of compound as insulation is determined solely by physical and electrical tests. No limitations as to the kind or amount of rubber or other ingredients are specified, so as to permit the use of new materials and modern developments in the art, provided rigid tests are complied with. The use of Performance compound will ensure the obtaining of an insulation comparable with the best type of Thirty Per Cent, and one which represents the most advanced progress in compounding unrestricted by chemical analysis.

The above compounds, Black Core, Engineers', Thirty-Per-Cent Hevea and Performance Grade, represent the standard types of insulation used for building wire and cables and low voltage power cables.

Habirshaw Wire and Cable

Continued

Some of the special compounds regularly furnished by the Habirshaw Cable and Wire Corporation are briefly described below. Complete specifications and information on these types of insulation will be furnished on request.

Habirite

Habirshaw Habirite is a high voltage compound having low water absorption, high dielectric strength, is corona-resistant and has remarkable aging qualities, as indicated by natural life and long time Geer Oven aging tests.

Performite

Habirshaw Performite compound represents the most modern development in so-called super-aging compounds. It shows remarkable results in both Oxygen Bomb and Geer Oven aging tests and is the best rubber compound for high temperature and long service life. This compound is standard for I.A.M.E. Fire and Police Signal Cables.

Forty Per-Cent and Sixty Per-Cent Jacket Compounds

These compounds are used for abrasion-proof coverings on portable cords, arc-welding cable, mine cable, etc.

Other Compounds

In addition to the above, rubber compounds can be furnished which are resistant to oil, acids and alkali.

The Habirshaw Cable and Wire Corporation is in a position, with its well-equipped research laboratories and technical staff, to give expert advice on all special problems.

Habirshaw

Flame-Stop Finish

The new Code requires that all 600 volt braided building wire must have a flame retarding, moisture-resisting finish. This is one of the most constructive rulings ever introduced, tending to improve the quality of wire along with the improvement of quality in other wiring materials and devices.

Several years ago, Habirshaw, looking to the future, developed Habirshaw Flame-Stop Wire with the required flame retarding finish.

There has been over 200,000,000 feet of Habirshaw Flame-Stop Wire installed in the outstanding buildings of the United States due to the foresight of the leading architects, engineers and electrical contractors.

Habirshaw Flame-Stop Wire is backed up by Habirshaw's policy slogan *"Proven by the test of time."*

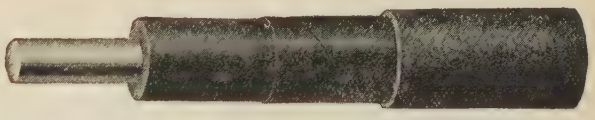
Habirshaw Wires and Cables are also supplied with metallic protective coverings. Lead sheathed cables are carried in stock; steel strip and wire armored and other special coverings are manufactured to order.

Varnished Cloth Insulation

Habirshaw varnished cambric insulated cables are manufactured and guaranteed in accordance with I.P.C.E.A. Specifications. Wires and cables of this type may be used at higher operating temperatures than rubber insulated cable and are used for switchboard wiring, feeders and power wiring. They are also used for voltages higher than ordinarily recommended for rubber cables.

Habirshaw Rubber Covered Braided Solid Wires and Cables

Single Conductor—600 Volts N.E.C.S.



Single Braided

Size A.W.G.	Approved Carrying Capacity Amperes	Rubber Wall 64th Inch	Approximate O.D. Inches	Std. Pkg. Feet	Type Package Bundle	Shipping Wt., Lbs. per 1000 Feet
*18	3	1	100	5000	5 Coils	10
*16	6	1	110	5000	5 Coils	14
18	3	2	135	5000	5 Coils	14
16	6	2	.145	5000	5 Coils	18
14	15	3	.190	2500	5 Coils	30
12	20	3	.205	2500	5 Coils	40
10	25	3	.225	2500	5 Coils	55
8	35	4	.280	500	†Coil	86
6	50	4	.315	500	†Coil	120
4	70	4	.375	500	†Coil	180

Double Braided

14	15	3	.220	2500	5 Coils	36
12	20	3	.235	2500	5 Coils	47
10	25	3	.255	2500	5 Coils	62
8	35	4	.310	500	†Coil	96
6	50	4	.360	500	†Coil	135
4	70	4	.405	500	†Coil	190

*Fixture wire.

Habirshaw Rubber Covered Braided Stranded Wires and Cables

Single Conductor—600 Volts N.E.C.S.

Single Braided

Size A.W.G.	Approved Carrying Capacity Amperes	Rubber Wall 64th Inch	Approximate O.D. Inches	Std. Pkg. Feet	Type Package Bundle	Shipping Wt., Lbs. per 1000 Feet
14	15	3	.195	2500	5 Coils	32
12	20	3	.215	2500	5 Coils	43
10	25	3	.240	2500	5 Coils	59
8	35	4	.300	500	†Coil	93
6	50	4	.355	500	†Coil	135
4	70	4	.400	500	†Coil	195
2	90	4	.460	500	†Coil	285

Double Braided

14	15	3	.225	2500	5 Coils	38
12	20	3	.245	2500	5 Coils	50
10	25	3	.270	2500	5 Coils	67
8	35	4	.330	500	†Coil	103
6	50	4	.385	500	†Coil	145
4	70	4	.430	500	†Coil	205
2	90	4	.490	500	†Coil	295
1	100	5	.565	1000	Reel, 30″	435
1/0	125	5	.605	1000	Reel, 36″	560
2/0	150	5	.650	1000	Reel, 36″	660
3/0	175	5	.700	1000	Reel, 36″	780
4/0	125	5	.760	1000	Reel, 36″	930

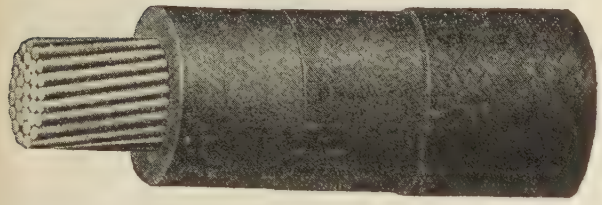
†Single coils paper wrapped.

NOTE.—Corrugated paper used on reels up to 42 inches, inclusive. Lagging used only when specified. Sizes 48 to 84 inches inclusive, lagged.

Habirshaw Rubber Covered Braided Stranded Circular Mil Cables

Single Conductors

600 Volts N. E. C. S.



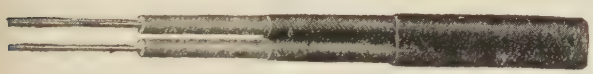
Size Circular Mils	Approved Carrying Capacity Amperes	Rubber Wall 64th Inch	Approximate O.D. Inches	Std. Pkg. Feet	Type Package	Shipping Wt., Lbs. per 1000 Feet
250000	240	6	.840	1000	Reel, 36″	1090
300000	275	6	.895	1000	Reel, 42″	1390
350000	300	6	.945	1000	Reel, 42″	1560
400000	325	6	.990	1000	Reel, 42″	1740
450000	370	6	1.035	1000	Reel, 42″	1905
500000	400	6	1.110	1000	Reel, 42″	2095
600000	450	7	1.220	500	Reel, 42″	2695
650000	...	7	1.255	500	Reel, 42″	2890
700000	500	7	1.290	500	Reel, 42″	3055
750000	...	7	1.325	500	Reel, 42″	3230
800000	550	7	1.360	500	Reel, 42″	3400
900000	600	7	1.420	500	Reel, 42″	3740
1000000	650	7	1.480	500	Reel, 42″	4070
1250000	750	8	1.645	500	Reel, 48″	5490
1500000	850	8	1.770	500	Reel, 48″	6305
1750000	950	8	1.885	500	Reel, 56″	7590
2000000	1050	8	1.990	500	Reel, 56″	8420

Unless otherwise specified the above lengths and packing will be furnished. Where special lengths are required, this should be specially noted on the orders.

NOTE.—Corrugated paper used on reels up to 42 inches, inclusive. Lagging used only when specified. Sizes 48 to 84 inches inclusive, lagged.

Habirshaw Rubber Covered Braided Wire

Twin Flat Conductor—600 Volts N. E. C. S.



Solid

Size A.W.G.	Approved Carrying Capacity Amperes	Rubber Wall 64th Inch	Approximate O.D. Inches	Std. Pkg. Feet	Type Package Bundle	Shipping Wt., Lbs. per 1000 Feet
14	15	3	.235x.420	500	†Coil	71
12	20	3	.250x.455	500	†Coil	92
10	25	3	.270x.495	500	†Coil	125
8	35	4	.325x.610	500	†Coil	190
6	50	4	.360x.680	1000	Reel, 30″	325

Stranded

14	15	3	.240x.440	500	Coil	76
12	20	3	.260x.475	500	Coil	99
10	25	3	.285x.525	500	Coil	130
8	35	4	.345x.645	500	Coil	200
6	50	4	.385x.725	1000	Reel, 30″	340

†Single coils paper wrapped.

NOTE.—Corrugated paper used on reels up to 42 inches, inclusive. Lagging used only when specified. Sizes 48 to 84 inches inclusive, lagged.

Reels

Some sizes and kinds of wires necessarily must be shipped on reels.

In such cases the reels will be billed at cost and credited at full billing value, if returned to mill within six months of shipping date.

Obtain return tags and shipping instructions before shipping reels.

Habirshaw Rubber Covered Braided Wire

3-Conductor—Solid

600 Volts

Each conductor of the 3-Conductor Rubber Covered House Wire is insulated by Black Core rubber compound. The covering over insulation is a 2 to 6 A.W.G., one rubber filled tape, and an 8 to 14 A.W.G., one saturated braid.

The conductors are grouped by twisting. They are filled with jute, covered by one rubber filled tape. The whole is covered by a saturated cotton braid.

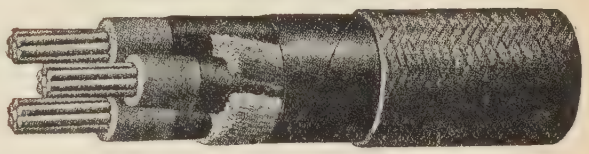
Size A.W.G. Gauge	No. of Strands	Rubber Wall 64th Inch	Approximate O.D. Inches	Std. Pkg. Feet	Type Package	Shipping Wt., Lbs. per 1000 Feet
14	1	3	.480	1000	Reel, 30″	185
12	1	3	.515	1000	Reel, 30″	215
10	1	3	.560	1000	Reel, 30″	265
8	1	4	.690	1000	Reel, 36″	410
6	1	4	.760	1000	Reel, 36″	545
4	1	4	.850	1000	Reel, 36″	720

NOTE.—Corrugated paper used on reels up to 42 inches, inclusive, lagging used on above sizes only when specified. Sizes 48 to 84 inches inclusive, lagged.

Habirshaw Rubber Covered Braided Cable

3-Conductor—Stranded

600 Volts



The 3-conductor stranded code house cable is used under the same conditions as solid 3-conductor code house cable unless greater flexibility is required, especially in larger sizes.

Number of conductors, 3.

Range of sizes, 500,000 cm to 14 A. W. G., stranded.

Insulation on each conductor, "Black Core" rubber compound.

Covering over insulation, 500,000 cm to 6 A.W.G., one rubber filled tape, 8 to 14 A. W. G., one saturated braid.

Grouping of conductors, twisted.

Fillers, jute.

Covering over jute, one rubber filled tape.

Covering over all, one saturated braid.

Size A.W.G. Gauge	No. of Strands	Rubber Wall 64th Inch	Approximate O.D. Inches	Std. Pkg. Feet	Type Package	Shipping Wt., Lbs. per 1000 Feet
14	7	3	.500	1000	Reel, 30″	190
12	7	3	.540	1000	Reel, 30″	230
10	7	3	.590	1000	Reel, 30″	280
8	7	4	.735	1000	Reel, 36″	435
6	7	4	.805	1000	Reel, 36″	575
4	7	4	.905	1000	Reel, 42″	890
3	7	4	.970	1000	Reel, 42″	1025
2	7	4	1.040	1000	Reel, 42″	1190
1	19	5	1.225	1000	Reel, 48″	1750
1/0	19	5	1.315	500	Reel, 42″	1985
2/0	19	5	1.410	500	Reel, 48″	2820
3/0	19	5	1.520	500	Reel, 48″	3220
4/0	19	5	1.645	500	Reel, 56″	4185
250000cm	37	6	1.815	500	Reel, 56″	4715
300000 "	37	6	1.935	500	Reel, 62″	5280
350000 "	37	6	2.045	500	Reel, 62″	6540
400000 "	37	6	2.145	500	Reel, 62″	7115
450000 "	37	6	2.240	500	Reel, 62″	7655
500000 "	37	6	2.330	500	Reel, 62″	8210

NOTE.—Corrugated paper used on reels up to 42 inches inclusive, lagging used on above sizes only when specified. Sizes 48 to 84 inclusive, lagged.

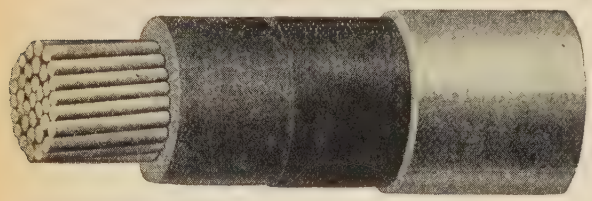
Habirshaw Rubber and Lead Covered Cable

Solid Cable, Single-Conductor

Size A.W.G.	No. of Strands Concentric	Thickness of Insulation 64ths Inch	Thickness of Lead Sheath 64ths Inch	Diameter Over Lead Inches	Approx. Ship. Wt. Lbs. per 1000 Ft.
18	1	2	2	.195	130
16	1	2	2	.205	140
14	1	3	2	.250	170
12	1	3	2	.270	190
10	1	3	3	.320	285
8	1	4	3	.375	335
6	1	4	4	.440	545
4	1	4	4	.485	640

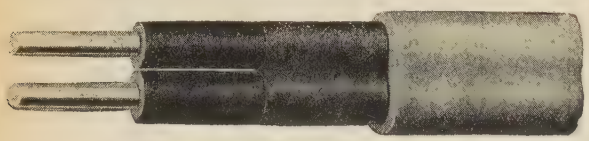
Stranded, Single-Conductor

600 Volts N. E. C. S.



14	7	3	2	.260	175
12	7	3	2	.280	195
10	7	3	3	.335	300
8	7	4	3	.395	445
6	7	4	4	.465	575
4	7	4	4	.510	680
3	7	4	4	.540	745
2	7	4	4	.570	825
1	19	5	4	.645	1015
1/0	19	5	4	.685	1120
2/0	19	5	4	.730	1270
3/0	19	5	4	.780	1440
4/0	19	5	4	.840	1645
C.M.					
250,000	37	6	5	.950	2355
300,000	37	6	5	1.005	2595
350,000	37	6	5	1.055	2950
400,000	37	6	5	1.100	3180
450,000	37	6	5	1.145	3400
500,000	37	6	5	1.190	3610
600,000	61	7	6	1.330	4665
650,000	61	7	6	1.365	4890
700,000	61	7	6	1.400	5355
750,000	61	7	6	1.435	5575
800,000	61	7	6	1.470	5785
900,000	61	7	6	1.530	6210
1,000,000	61	7	6	1.590	6625
1,250,000	91	8	7	1.790	8645
1,500,000	91	8	7	1.910	9655
1,750,000	127	8	7	2.025	11300
2,000,000	127	8	7	2.130	12305

Solid Cable, Twin Flat-Conductor

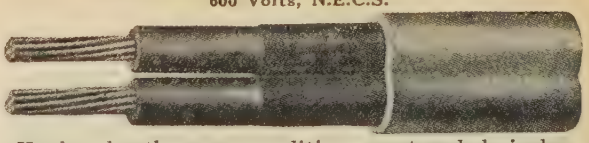


18	1	2	2	.195x.330	185
16	1	2	2	.205x.350	200
14	1	3	2	.250x.440	255
12	1	3	3	.300x.505	410
10	1	3	3	.320x.545	465
8	1	4	3	.375x.660	560
6	1	4	4	.440x.760	900
4	1	4	4	.485x.845	1075

Habirshaw Lead Covered Cable

Stranded Twin Flat Conductor

600 Volts, N.E.C.S.

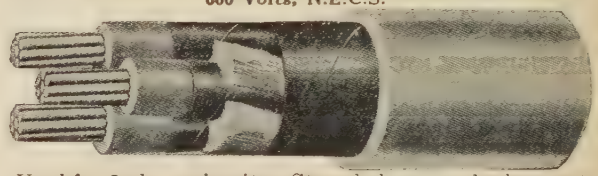


Used under the same conditions as stranded single conductor lead covered wire. Sizes range from 0000 to 14 A.W.G., stranded. Black Core rubber compound insulation on each conductor. Rubber filled tape or braid covering over insulation. Conductors grouped parallel. When specified, round cable with 2 conductors twisted will be furnished. Covering over all is lead sheath. Type letter R D L.

Size A.W.G.	No. of Strands Concentric	Thickness Insulation 64ths Inch	Thickness Lead Sheath 64ths Inch	Diameter Over Lead Inches	Approx. Ship Wt. Lbs. per 1000 Ft.
14	7	3	2	.260x .455	265
12	7	3	3	.310x .525	430
10	7	3	3	.335x .575	485
8	7	4	3	.395x .695	580
6	7	4	4	.465x .804	955
4	7	4	4	.510x .900	1140
3	7	4	4	.540x .955	1270
2	7	4	4	.570x1.020	1670
1	19	5	5	.675x1.190	2170
1/0	19	5	5	.715x1.275	2550
2/0	19	5	5	.760x1.365	2835
3/0	19	5	5	.810x1.470	3185
4/0	19	5	5	.870x1.585	3835

Habirshaw Lead Covered Cable

600 Volts, N.E.C.S.



Used for 3-phase circuits. Stranded are used where extra flexibility is required in smaller sizes and always in larger sizes where solid conductors would make cable too stiff to handle.

Contains 3 conductors. Sizes range from 500,000 cm. to 14 A. W. G. Each conductor insulated with Black Core rubber compound. Insulation covered by rubber filled tape. Conductors twisted, filled with jute. Rubber filled tape covering over jute. Lead sheath covering over all.

Stranded, 3-Conductor Round

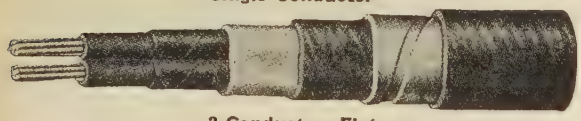
Size A.W.G.	No. of Strands Concentric	Thickness Insulation 64ths Inch	Thickness Lead Sheath 64ths Inch	Diameter Over Lead Inches	Approx. Ship. Wt. Lbs., per 1000 Ft.
14	7	3	3	.550	535
12	7	3	3	.590	600
10	7	3	4	.670	890
8	7	4	4	.805	1060
6	7	4	4	.885	1595
4	7	4	5	1.015	2120
3	7	4	5	1.080	2455
2	7	4	5	1.150	2705
1	19	5	6	1.335	3695
1/0	19	5	6	1.425	4335
2/0	19	5	6	1.520	4785
3/0	19	5	6	1.630	5805
4/0	19	5	7	1.790	6910
250,000	37	6	7	1.960	7710
300,000	37	6	7	2.075	9110
350,000	37	6	7	2.185	9845
400,000	37	6	8	2.319	11145
450,000	37	6	8	2.415	11860
500,000	37	6	8	2.505	12580

Solid, 3-Conductor Round

18	1	2	3	.410	375
16	1	2	3	.435	405
14	1	3	3	.530	515
12	1	3	3	.565	575
10	1	3	4	.640	850
8	1	4	4	.770	1005
6	1	4	4	.840	1265
4	1	4	5	.960	2010

Habirshaw Steel Tape Parkway Cables

Single Conductor



2-Conductor, Flat

Parkway cables are used for transmission and distribution where it is preferable to bury the cables directly in the ground rather than to put them in ducts. Any kind of cable will be furnished with park cable covering, but the following types are in general use for distribution purposes.

Standard parkway cables (0-600 volts). Number of conductors, one to three.

Insulation on each conductor, "Black Core" rubber compound for 5000 volts or less. For higher voltage, special high voltage rubber.

Covering over insulation, rubber filled tape. Covering over tape, lead sheath.

Covering over lead sheath, asphalted jute.

Protective armor, two ungalvanized steel tapes, wound in the same direction, the outer tape covering the spaces between turns of the inner tape.

Outside covering, asphalted jute.

Parkway cables with galvanized steel tapes will be furnished when so specified.

Habirshaw Parkway Cables are made to conform to I.P.C.E.A. standards for rubber insulation and metallic coverings.

600 Volts
1-Conductor Rubber Insulated

Size A.W.G.	No. of Strands Concentric	Thick. Insulation 64ths In.	Thick. Lead Covering 64ths In.	Thick. Steel Tape Armor, In.	Overall O.D., In Finished Cable	Net Wt., Lbs. per 1000 Ft. Finished Cable	Shipping Wt., Lbs. per 1000 Feet
14	1	3	3	.020	.580	460	520
12	1	3	3	.020	.595	485	545
10	1	3	3	.020	.620	530	630
8	1	4	3	.020	.670	630	730
6	1	4	3	.020	.710	710	810
4	7	4	3	.020	.810	900	1000
2	7	4	4	.020	.900	1230	1330
1	19	5	4	.020	.975	1425	1525
1/0	19	5	4	.020	1.020	1570	1670
2/0	19	5	4	.020	1.060	1740	1970
3/0	19	5	4	.020	1.115	1945	2175
4/0	19	5	5	.020	1.200	2420	2650

2-Conductor Rubber Insulated (Flat)

14	1	3	3	.020	.615x .805	660	760
12	1	3	3	.020	.630x .835	720	820
10	1	3	4	.020	.685x .910	935	1035
8	1	4	4	.020	.740x1.025	1150	1250
6	1	4	4	.020	.775x1.095	1310	1410
4	7	4	5	.020	.875x1.265	1840	1940
2	7	4	5	.030	1.005x1.455	2460	2690
1	19	5	5	.030	1.075x1.595	2870	3330
1/0	19	5	6	.030	1.150x1.710	3450	4410
2/0	19	5	6	.030	1.195x1.800	3820	4780
3/0	19	5	6	.030	1.250x1.900	4260	5220
4/0	19	5	6	.030	1.305x2.020	4790	5750

3-Conductor Rubber Insulated

14	1	3	4	.020	.890	1050	1150
12	1	3	4	.020	.920	1130	1230
10	1	3	4	.020	.975	1250	1350
8	1	4	4	.020	1.100	1550	1770
6	1	4	5	.020	1.200	2030	2250
4	7	4	5	.030	1.420	2820	3300
2	7	4	5	.030	1.540	3370	4330
1	19	5	6	.030	1.740	4300	5260
1/0	19	5	6	.030	1.825	4760	5720
2/0	19	5	6	.030	1.920	5300	6260
3/0	19	5	6	.030	2.035	5960	7560
4/0	19	5	7	.030	2.190	7210	8800

Habirshaw Steel Tape Parkway Cables

Continued

1500 Volts
1-Conductor Rubber Insulated

Size A.W.G.	No. of Strands Concentric	Thick. Insulation 64th In.	Thick. Lead Covering 64th In.	Thick. Steel Tape Armor, In.	Overall O.D., In. Finished Cable	Net. Wt., Lbs. per 1000 Ft. Finished Cable	Shipping Wt., Lbs. per 1000 Feet
14	1	5	3	.020	.645	550	650
12	1	5	3	.020	.660	580	680
10	1	5	3	.020	.680	620	720
8	1	5	3	.020	.700	670	770
6	1	6	3	.020	.800	850	950
4	7	6	4	.020	.900	1180	1280
2	7	6	4	.020	.970	1360	1460
1	19	7	4	.020	1.040	1560	1780
1/0	19	7	4	.020	1.080	1710	1930
2/0	19	7	4	.020	1.120	1880	2100
3/0	19	7	5	.020	1.210	2320	2540
4/0	19	7	5	.020	1.270	2580	2800

2500 Volts
1-Conductor Rubber Insulated

14	1	7	3	.020	.700	640	740
12	1	7	3	.020	.725	670	770
10	1	7	3	.020	.745	720	820
8	1	7	3	.020	.800	820	920
6	1	8	4	.020	.900	1120	1220
4	7	8	4	.020	.970	1310	1410
2	7	8	4	.020	1.030	1500	1600
1	19	8	4	.020	1.070	1630	1850
1/0	19	8	4	.020	1.110	1790	2010
2/0	19	8	4	.020	1.150	1960	2180
3/0	19	8	5	.020	1.240	2400	2880
4/0	19	8	5	.020	1.300	2660	3140

3500 Volts
1-Conductor Rubber Insulated

14	1	9	3	.020	.800	780	880
12	1	9	3	.020	.820	820	920
10	1	9	3	.020	.840	870	970
8	1	9	4	.020	.895	1090	1190
6	1	9	4	.020	.930	1180	1280
4	7	9	4	.020	1.000	1370	1470
2	7	9	4	.020	1.060	1570	1590
1	19	9	4	.020	1.100	1700	1920
1/0	19	9	4	.020	1.140	1850	2070
2/0	19	9	5	.020	1.220	2260	2740
3/0	19	9	5	.020	1.270	2490	2970
4/0	19	9	5	.020	1.330	2750	3230

5000 Volts
1-Conductor Rubber Insulated

14	1	10	3	.020	.830	840	940
12	1	10	3	.020	.850	887	987
10	1	10	4	.020	.900	1080	1180
8	1	10	4	.020	.930	1160	1260
6	1	10	4	.020	.960	1250	1350
4	7	10	4	.020	1.030	1450	1550
2	7	10	4	.020	1.090	1650	1870
1	19	10	4	.020	1.130	1780	2000
1/0	19	10	5	.020	1.200	2160	2380
2/0	19	10	5	.020	1.250	2350	2830
3/0	19	10	5	.020	1.300	2570	3050
4/0	19	10	5	.030	1.420	3110	3600

2500 Volts
2-Conductor Rubber Insulated (Flat)

8	1	7	5	.020	.860x1.240	1660	1880
6	1	7	5	.020	.900x1.310	1850	2070

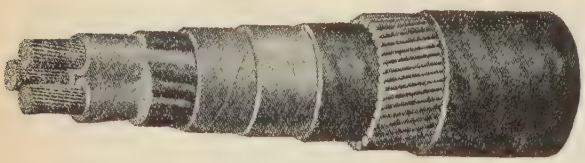
3500 Volts
2-Conductor Rubber Insulated

8	1	9	5	.030	.990x1.430	2150	2370
6	1	9	5	.030	1.020x1.220	2330	2550

5000 Volts
2-Conductor Rubber Insulated

8	1	10	5	.030	1.020x1.490	2290	2770
6	1	10	5	.030	1.050x1.560	2490	2970

Habirshaw Armored Submarine Cable



Armored cable, or submarine cable, as it is sometimes called, is used under water for crossing rivers, bays and lakes.

Armored cable may be insulated with paper, varnished cambric or rubber compound. If insulated with paper or varnished cambric, a lead sheath is required. If insulated with rubber compound, a lead sheath is preferable, but may be omitted where the water, in which the cable is to be laid, does not contain injurious impurities and does not attain an unusually high temperature. If the cable is rubber insulated and not lead covered, it has a rubber filled cotton tape.

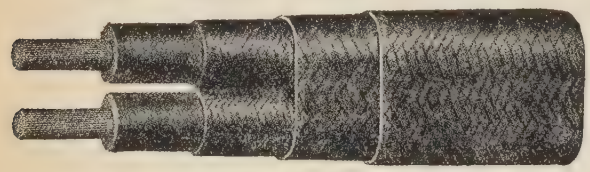
The leaded or taped core is served with jute yarn, run through hot asphalt compound, then armored with galvanized steel wires, *run through hot asphalt compound, served with two layers of yarn and finally run through asphalt compound.

The asphalt and jute over the armor may be omitted, if desired.

Upon receipt of inquiry stating the conditions of service, our Engineering Department will furnish additional data.

*Hot asphalt compound is also applied during armoring at the points where the armor wires come into contact, insuring complete sealing of the armor.

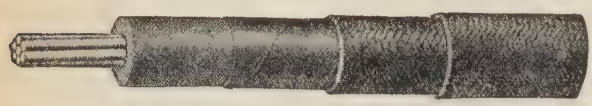
Habirshaw Mast-arm Cable



Mast-arm cable is used where a flexible cable, capable of passing over a pulley, is required to connect arc-lamps suspended from a mast-arm or bracket to the feeder line where the lamps must be lowered for maintenance purposes.

Number of conductors, 2. Range of sizes, 6 and 8 A. W. G. Stranding, flexible. Insulation on each conductor, "Black Core" rubber compound. Thickness of insulation, code standard. Covering over insulation, one saturated cotton braid. Grouping of conductors, parallel. Covering over all, 2 saturated cotton braids.

Habirshaw Corona-Proof Cable



This cable is used where rubber insulation is desirable, yet must be proof against the deteriorating effects of the elements and the oxidizing action of Corona discharges. It is a cable insulated with a special rubber compound, especially developed for this service, covered with a layer of tape, enclosed in one or more saturated cotton braids.

This cable is used for aerial distribution circuits at voltages of 2200 and over. Also for special purposes where extra high voltages are used.

Upon receipt of inquiry stating conditions of service, our Engineering Department will furnish additional data.

Habirshaw Fire Alarm Cable

Habirshaw Fire Alarm and Police Signalling Cable is used to connect fire alarm and police signal boxes, on the street and in buildings, with department headquarters.

Such cables are usually made to customers' specifications or to the Specifications of the International Association of Municipal Engineers. This latter specification calls for Performite insulation and is recommended as the most satisfactory insulation for this class of cable.

Upon receipt of inquiry stating conditions of service, our Engineering Department will furnish recommendations and additional data.

Habirshaw Signal Wire and Cable

American Railroad Association Signal Division Standard

Railway signal wire is made to conform with the exacting specifications of the American Railroad Association Signal Division Standard and represents the standard engineering practice in this line. Standard practice means a great deal more to the railway signal engineer than to most others, as upon the reliability of signals depends the safety of millions of passengers.

The present American Railroad Association Signal Division Standard specification for rubber insulation is a development resulting from a study of the manufacture, inspection and use of rubber insulated wire extending over a period of many years, by a strong and representative committee of signal engineers who have given considerable time and attention to this subject. The specification has undergone changes in this time and every change has improved the product and confirmed the opinion of signal engineers as to the excellent quality of the insulation which it exacts. Habirshaw also makes a higher grade signal wire known as Habirite signal wire which is recommended for locations where operating conditions are exceptionally severe.

Habirshaw has specialized on A. R. A. Signal wire and makes all standard types including the following:

Rubber Insulated Signal Wire for 660 Volts or Less

Number of conductors, one or two.

Range of sizes, 0 to 18 A. W. G., solid.

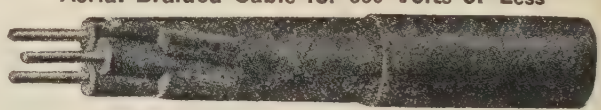
Insulation on each conductor, A. R. A. Signal Division compound.

Covering over insulation, one cotton braid, weatherproof to A. R. A. specification.

Thickness of insulation, No. 0-2 A. W. G., inclusive, $\frac{8}{64}$ inch; 4-8 A. W. G., inclusive, $\frac{6}{64}$ inch; 9-14 A. W. G., inclusive, $\frac{5}{64}$ inch; 16-18 A. W. G., inclusive, $\frac{4}{64}$ inch.

Shipped on reels or in coils as ordered. If in coils the following lengths are standard: No. 6. A. W. G., 1000 ft.; 8-12 A. W. G., inclusive, 1500 ft; 14 A. W. G., 2000 ft.

Aerial Braided Cable for 660 Volts or Less



Number of conductors, as specified.

Range of sizes, 4 to 16 A. W. G. (not necessarily all the same size in a given cable).

Insulation on each conductor, A. R. A. Signal Division compound. Can be furnished lead covered if required.

Fillers, dry jute.

Covering over each layer, rubber filled tape.

Covering over all, one saturated cotton braid, $\frac{2}{64}$ in. thick.

Thickness of insulation, No. 4 A. W. G., $\frac{6}{64}$ inch; 6-9 A. W. G., inclusive, $\frac{5}{64}$ inch, 10-14 A. W. G., inclusive, $\frac{4}{64}$ inch; 16 A. W. G., $\frac{3}{64}$ inch.

Cables of more than three and less than seven conductors are made with jute or sisal center. One wire in each layer is taped for a tracer.

Cables will be shipped on reels.

Habirshaw Varnished Cambric Insulated Cable

Varnished cambric insulated cable is used:

a. In power stations and sub-stations for connecting machinery and apparatus of all voltages (see Apparatus Cable and Station Cable).

b. In buildings in place of rubber insulated cable, especially for the larger sizes.

c. For low voltage underground distribution, where special reliability is desired.

d. On vibrating structures where paper insulation cannot be used due to the crystallization of the lead sheath.

Varnished cambric insulation consists of varnished cambric tapes applied helically to the conductor with intervening layers of mineral base grease. The turns of tape overlap and the joints in successive layers are staggered. They are also reversed at least every three layers.

Varnished cambric insulated cable is usually covered as follows:

Apparatus cable, saturated cotton braid.

Station cable, a rubber filled cotton tape and a flameproof braid.

Building mains, a rubber filled cotton tape and two saturated cotton braids.

Underground cable, lead sheath.

Cable for outdoor structures. a rubber filled cotton tape, two galvanized steel tapes, and a layer of asphalted jute under and over the armor.

Upon receipt of inquiry stating conditions of service, our Engineering Department will furnish additional data.

Habirshaw Tree Wire

Habirshaw Tree Wire is a single rubber insulated, medium hard-drawn tinned copper conductor, enclosed in protective coverings of rubber-filled tapes, pre-asphalt-saturated jute, fibre tape armor, asphalt and a cotton braid thoroughly saturated and finished with Habirshaw Flame-Stop Finish.

Tree Wire is designed for use on aerial distribution lines consisting nominally of weatherproof wire, but where the lines pass through trees. The insulation for tree wire is not designed to carry the full voltage to ground continuously, as the line insulators carry it under normal conditions. It is only when wet and in contact with a wet tree that the full voltage is carried by the rubber insulation.

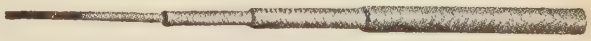
Habirshaw Service Drop Cable

Service Drop Cable is used for bringing power aerially from the main lines on poles to buildings.

Habirshaw Service Drop Cable is a two or three conductor cable, both conductors of the duplex and two conductors of the triplex being insulated with Type AO 30% Hevea Rubber Compound, covered with two substantial cotton braids, thoroughly saturated with asphaltic compound and finished with Habirshaw Flame-Stop Finish. The neutral conductor of the three conductor cable is without rubber insulation, but covered with three substantial weatherproof braids. Conductors in both types are laid together helically to form a twisted cable, without overall covering.

Size A.W.G. Stranded.....	8	6	4	2
Max. Diameter 2-Conductor.....in.	.78	.86	.95	1.07
Max. Diameter 3-Conductor.....in.	.84	.92	1.03	1.16

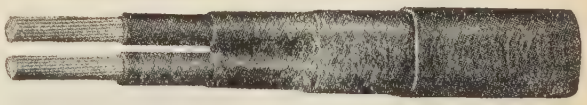
Habirlite
Habirshaw Headlight Wire
Single Conductor



Habirshaw wire is used where resistance to oil heat, sulphur fumes and steam is essential. Standard sizes, 10 to 14 A. W. G., solid. Wrapping, soft cotton wind, saturated. Insulation, heat proof compound insoluble in mineral oils, non-hygroscopic, chemically inert to reagents and flexible to breaking point of wire. Covering, three cotton braids saturated with heat resisting compound.

Size A.W.G.	Diameter Overall Inches	Weight Lbs. per 1000 Ft.	Type of Package	Feet in Package	Shipping Weight of Package
10	.220	51	10 coils in box	10000	540
12	.200	37	10 coils in box	10000	390
14	.190	29	10 coils in box	10000	310

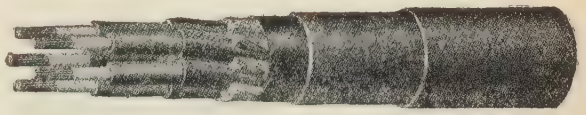
Habirshaw Battery Charging Cable
2-Conductor



Battery charging cable is used for connecting storage batteries of automobiles to the stationary charging outfit. Also used largely by railroads for charging train lighting batteries on electric baggage trucks both in the charging rooms and for boosting while in position under railroad cars and on the baggage trucks. Range of sizes, 0000 to 8 A. W. G., stranded. Insulation on each conductor, "Black Core" rubber compound. Covering over insulation, one saturated braid. Grouping of conductors, twin (flat), except No. 0 and larger, which are round. Fillers, jute (for No. 0 and larger, only). Covering over both conductors, two saturated braids.

Size A.W.G.	No. of Strands	Thickness of Insulation 64ths Inch	Outside Diameter Inches	Weight per 1000 Feet Lbs.	Type of Package	Feet in Package	Shipping Weight of Package Lbs.
0000	259	5	1.720	2220	Reel	1000	2870
000	133	5	1.590	1750	Reel	1000	2400
00	133	5	1.474	1520	Reel	1000	2170
0	133	5	1.368	1265	Reel	1000	1915
1	91	5	.625x1.160	825	Reel	1000	1205
2	91	4	.560x1.030	645	Reel	1000	825
4	61	4	.495x .900	458	Reel	1000	638
6	61	4	.446x .802	317	Reel	1000	397
8	61	4	.395x .720	210	Reel	1000	310

Habirshaw Control Cable



Station control cables are used for the remote control of outdoor or automotive substations and are installed in conduit being either braid or lead covered.

Number of conductors, 1 to 7.

Usual size, 19 No. 22 A. W. G. or 37 No. 22 A. W. G.

Separator, soft cotton wind.

Insulation on each conductor, rubber compound of quality specified.

Thickness of insulation each conductor, 3/64 or 4/64 inch.

Covering over insulation, colored dry cotton braid.

Grouping of conductors, twisted.

Fillers, dry jute.

Covering over filler, one rubber filled tape.

Covering over all, two saturated cotton braids or lead as specified.

It is usual to have a different colored braid on each conductor in order to facilitate the identification of circuits.

Upon receipt of inquiry stating conditions of service, our Engineering Department will furnish additional data.

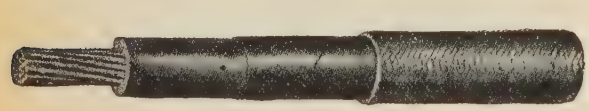
Habirshaw Rubber Covered Flexible Cable

600 Volts

Size B. & S.	Carrying Cap. Amps.	No. of Wires	Size Wires	Rubber Wall In.	Diameter Over All In.	Approx. Wt., Lbs. per 1000 Feet
0000	225	133	.0399	5/64	.850	900
000	175	133	.0356	5/64	.780	730
00	150	133	.0317	5/64	.725	610
0	125	133	.0282	5/64	.670	490
1	100	133	.0251	5/64	.610	415
2	90	133	.0226	4/64	.550	325
4	70	49	.0291	4/64	.477	212
6	50	49	.0231	4/64	.423	146
8	35	49	.0183	4/64	.321	93
10	25	37	.0168	3/64	.240	55
12	20	19	.0186	3/64	.218	40
14	15	19	.0147	3/64	.198	30

Habirshaw Mine Cable, Single Conductor

Locomotive or Gathering Reel Cable



Single conductor mine cable is used for operating gathering reel locomotive run on steel tracks which can be used for the return current.

Number of conductors, one.

Range of sizes, 2 to 6 A. W. G., flexible.

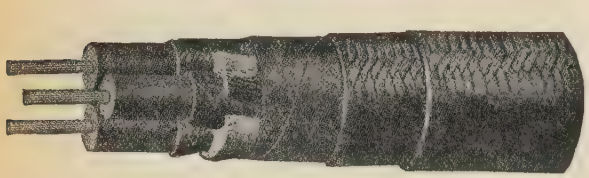
Insulation, "Black Core" rubber compound.

Covering over insulation, rubber filled tape.

Covering overall, one extra heavy or seine-twine (as specified), extra tight weatherproof braid.

Size A.W.G.	No. of Strands	Thickness of Insulation 64ths Inch	Outside Diameter Inch	Weight per 1000 Feet Lbs.	Type of Package	Feet in Package	Shipping Weight of Package Lbs.
2	133	4	.59	337	Reel	1500	685
3	133	4	.55	271	"	1500	586
4	133	4	.52	234	"	1500	431
6	133	4	.46	167	"	1500	330

Habirshaw Triplex Mine Cable



Triplex mine cables are used with three-phase motor equipments, and are usually made for pressures up to 600 volts.

Range of sizes, 2 to 8 A.W.G., flexible.

Insulation on each conductor "Black Core" rubber compound.

Covering over insulation, one saturated cotton braid or rubber-filled tape.

Grouping of conductors, twisted.

Fillers, jute.

Covering over filler, rubber filled tape.

Covering over all, one or two saturated extra tight braids.

Size A.W.G.	No. of Strands	Thickness of Insulation 64ths Inch	Outside Diameter Inches	Weight per 1000 Feet Lbs.	Type of Package	Feet in Package	Shipping Weight of Package Lbs.
2	49	4	1.203	1020	Reel	1500	2180
4	49	4	.997	725	"	1500	1548
6	49	4	.890	525	"	1500	1248
8	49	4	.800	345	"	1500	735

Habirshaw Twin Mine Cable

Flat

Twin (flat) mine cable is used for gathering reel locomotives, cutting machines, hoists, drills, and other electrical machines in mines.

Number of conductors, two.

Range of sizes, 2 to 8 A.W.G., flexible.

Insulation on each conductor, "Black Core" rubber compound.

Covering over each conductor, one saturated braid.

Grouping of conductors, parallel.

Marker, raised thread in the braid of one conductor.

Covering over all, two or three saturated extra tight braids as specified.

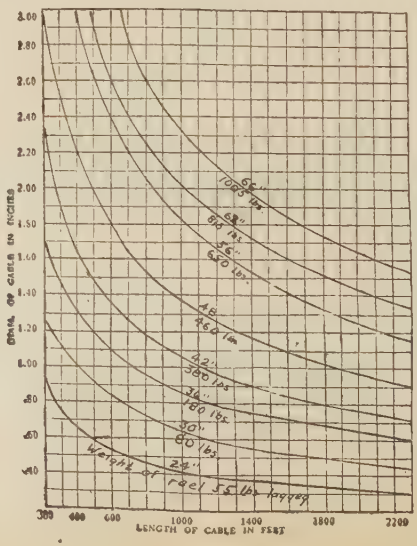
Size A.W.G.	No. of Strands	Thickness of Insulation 64ths	Thickness of Insulation Inch	Outside Diameter Inches	Weight per 1000 Feet Lbs.	Type of Package	Feet in Package	Shipping Weight of Package Lbs.
Double Braid								
2	49	4	1.094x.592		640	Reel	1500	1340
3	49	4	1.018x.554		550	"	1500	1205
4	49	4	.954x.522		460	"	1500	1070
5	49	4	.898x.494		390	"	1500	965
6	49	4	.846x.468		325	"	1500	668
8	49	4	.760x.426		220	"	1500	430
Triple Braid								
2	49	4	1.139x.637		700	Reel	1500	1430
3	49	4	1.063x.599		605	"	1500	1288
4	49	4	.999x.567		510	"	1500	1145
5	49	4	.943x.539		430	"	1500	1025
6	49	4	.891x.513		360	"	1500	720
8	49	4	.805x.471		250	"	1500	575

Reel Capacities

Curves Showing Reel Capacity for Cable Diameters Up to 3 Inches

Example

Diameter of Cable.....1.60 inches
Length of Cable..... 730 feet
Reel to Use..... 48-inch



General Cable Safecote Rubber Insulated Wire and Cable

600 Volts

Single Conductor

Solid

Size A.W.G.	Thick Rubber Insulation In.	Current Carry. Cap. Amps.	Single Braid Approx. Wt. Lbs. per 1000 Ft.	Single Braid Approx. Overall Diam. In.	Tape and Braid or Double Braid Approx. Wt. Lbs. per 1000 Ft.	Tape and Braid or Double Braid Approx. Overall Diam. In.
14	3/64	15	25	.19	29	.22
12	3/64	20	34	.21	38	.24
10	3/64	25	49	.23	54	.26
8	4/64	35	80	.28	85	.32
6	4/64	50	112	.32	120	.36
5	4/64	55	138	.34	148	.38
4	4/64	70	167	.39	175	.42
3	4/64	80	206	.42	213	.45
2	4/64	90	253	.44	261	.48
			Stranded (7 Strands)			
14	3/64	15	27	.20	30	.23
12	3/64	20	36	.22	40	.25
10	3/64	25	51	.24	56	.27
8	4/64	35	82	.30	90	.33
6	4/64	50	120	.34	125	.38
5	4/64	55	148	.37	158	.40
4	4/64	70	177	.42	189	.45
3	4/64	80	215	.45	230	.48
2	4/64	90	262	.48	277	.51

Twin Conductor

Solid

Size A.W.G.	Approximate Weight Pounds per 1000 Ft.	Thickness Rubber Insulation Inches	Approximate O.D., Inches Width	Approximate O.D., Inches Thickness	Current Carrying Capacity Amperes
14	62	3/64	.41	.22	15
12	82	3/64	.45	.24	20
10	114	3/64	.49	.26	25
8	174	4/64	.60	.32	35
		Stranded (7 Strands)			
14	64	3/64	.43	.23	15
12	84	3/64	.47	.25	20
10	124	3/64	.52	.27	25
8	186	4/64	.64	.33	35

Single Conductor, Stranded

Tape and Braid or Double Braid

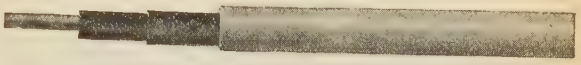
Tape and braid may be furnished in sizes 6 A.W.G. and larger, at manufacturer's option.

Size A.W.G.	No. of Strands	Approximate Weight Pounds per 1000 Ft.	Thickness Rubber Insulation Inches	Approximate O.D. Inches	Current Carrying Capacity Amperes
1	19	363	5/64	.59	100
0	19	443	5/64	.63	125
00	19	540	5/64	.67	150
000	19	663	5/64	.73	175
0000	19	813	5/64	.78	225
C.M.					
250000	37	961	3/32	.86	250
300000	37	1139	3/32	.92	275
350000	37	1300	3/32	97	300
400000	37	1473	3/32	1.02	325
450000	37	1634	3/32	1.06	360
500000	37	1814	3/32	1.10	400
550000	61	1999	7/64	1.17	425
600000	61	2177	7/64	1.21	450
650000	61	2333	7/64	1.25	475
700000	61	2512	7/64	1.28	500
750000	61	2673	7/64	1.32	525
800000	61	2848	7/64	1.35	550
850000	61	3007	7/64	1.38	575
900000	61	3194	7/64	1.41	600
950000	61	3342	7/64	1.44	625
1000000	61	3530	7/64	1.47	650
1250000	91	4400	8/64	1.64	675
1500000	91	5240	8/64	1.76	850
1750000	127	6060	8/64	1.88	950
2000000	127	6890	8/64	1.98	1050

General Cable Rubber Insulated and Lead Encased Wire and Cable

600 Volts

Single Conductor



Solid

Size A.W.G.	Approximate Weight Pounds per 1000 Ft.	Thickness Rubber Insulation Inches	Thickness Lead Wall Inches	Approx. Diam. Over Lead Inches	Current Carrying Capacity Amperes
18	91	1/32	1/32	.19	3
16	100	1/32	1/32	.20	6
14	135	3/64	1/32	.25	15
12	153	3/64	1/32	.26	20
10	259	3/64	3/64	.32	25
8	320	4/64	3/64	.36	35
6	488	4/64	3/64	.44	50
5	530	4/64	4/64	.46	55
4	580	4/64	3/64	.48	70
3	645	4/64	4/64	.51	80
2	705	4/64	4/64	.54	90
		Stranded—(7 Strands)			
18	98	1/32	1/32	.20	3
16	103	1/32	1/32	.21	6
14	143	3/64	1/32	.26	15
12	162	3/64	1/32	.28	20
10	267	3/64	3/64	.33	25
8	320	4/64	3/64	.38	35
6	517	4/64	4/64	.46	50
5	565	4/64	4/64	.48	55
4	619	4/64	4/64	.51	70
3	685	4/64	4/64	.54	80
2	767	4/64	4/64	.57	90
		Stranded—(19 Strands)			
1	931	5/64	4/64	.64	100
0	1061	5/64	4/64	.68	125
00	1195	5/64	4/64	.72	150
000	1362	5/64	4/64	.78	175
0000	1564	5/64	4/64	.83	225

Parallel Twin

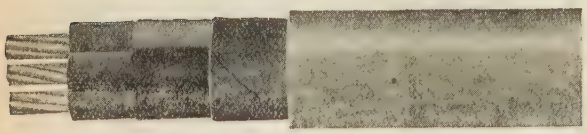
Solid

Size A.W.G.	Approx. Wt. Lbs. per 1000 Ft.	Thick. Rubber Insulation Inches	Thickness Lead Wall Inches	Approx. Diam. Over Lead Inches Width	Approx. Diam. Over Lead Inches Thick.	Current Carrying Capacity Amperes
18	142	1/32	1/32	.33	.19	3
16	164	1/32	1/32	.35	.20	6
14	222	3/64	1/32	.44	.25	15
12	356	3/64	3/64	.50	.30	20
10	410	3/64	3/64	.54	.32	25
8	540	4/64	3/64	.66	.38	35
6	800	4/64	4/64	.76	.44	50
5	885	4/64	4/64	.80	.46	55
4	946	4/64	4/64	.85	.48	70
3	1090	4/64	4/64	.90	.51	80
2	1222	4/64	4/64	.95	.54	90
		Stranded—(7 Strands)				
18	157	1/32	1/32	.34	.20	3
16	167	1/32	1/32	.36	.21	6
14	235	3/64	1/32	.45	.26	15
12	376	3/64	3/64	.52	.31	20
10	435	3/64	3/64	.57	.33	25
8	540	4/64	3/64	.66	.38	35
6	852	4/64	4/64	.80	.46	50
5	940	4/64	4/64	.85	.48	55
4	1045	4/64	4/64	.90	.51	70
3	1160	4/64	4/64	.96	.54	80
2	1309	4/64	4/64	1.02	.57	90
		Stranded—(19 Strands)				
1	1860	5/64	5/64	1.19	.67	100
0	2117	5/64	5/64	1.27	.71	125
00	2395	5/64	5/64	1.36	.76	150
000	2728	5/64	5/64	1.46	.81	175
0000	3115	5/64	5/64	1.58	.87	225

General Cable Rubber Insulated and Lead Encased Wire and Cable

3-Conductor, Twisted

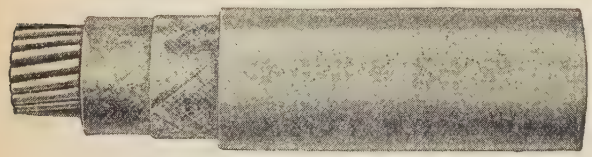
600 Volts



Solid

Size A.W.G.	Approximate Weight Pounds per 1000 Ft.	Thickness Rubber Insulation Inches	Thickness Lead Wall Inches	Approx. Diam. Over Lead Inches	Current Carrying Capacity Amperes
18	315	1/32	3/64	.41	3
16	345	1/32	3/64	.44	6
14	466	3/64	3/64	.55	15
12	522	3/64	3/64	.59	20
10	764	3/64	4/64	.66	25
8	960	4/64	4/64	.77	35
6	1168	4/64	4/64	.86	50
5	1525	4/64	5/64	.93	55
4	1666	4/64	5/64	.98	70
3	1870	4/64	5/64	1.03	80
2	2090	4/64	5/64	1.10	90
		Stranded—(7 Strands)			
18	330	1/32	3/64	.44	3
16	365	1/32	3/64	.46	6
14	490	3/64	3/64	.57	15
12	706	3/64	4/64	.65	20
10	807	3/64	4/64	.70	25
8	960	4/64	4/64	.77	35
6	1466	4/64	5/64	.94	50
5	1620	4/64	5/64	.99	55
4	1780	4/64	5/64	1.04	70
3	1986	4/64	5/64	1.11	80
2	2236	4/64	5/64	1.18	90
		Stranded—(19 Strands)			
1	2625	5/64	5/64	1.27	100
0	3340	5/64	6/64	1.39	125
00	3825	5/64	6/64	1.49	150
000	4365	5/64	6/64	1.59	175
0000	5430	5/64	7/64	1.76	225

Single Conductor, Stranded—Circular Mil Sizes



Size C.M.	No. of Strands	Appox. Wt. Lbs. per 1000 Ft.	Thick. Rubber Insulation Inches	Thick. Lead Wall Inches	Approx. Diam. Over Lead Inches	Current Carrying Capacity Amperes
250000	37	2027	3/32	5/64	.99	250
300000	37	2266	3/32	5/64	1.04	275
350000	37	2487	3/32	5/64	1.09	300
400000	37	2718	3/32	5/64	1.14	325
450000	37	2930	3/32	5/64	1.18	360
500000	37	3156	3/32	5/64	1.22	400
550000	61	3753	7/64	6/64	1.34	425
600000	61	3977	7/64	6/64	1.37	450
650000	61	4189	7/64	6/64	1.41	475
700000	61	4414	7/64	6/64	1.44	500
750000	61	4621	7/64	6/64	1.48	525
800000	61	4841	7/64	6/64	1.51	550
850000	61	5014	7/64	6/64	1.35	575
900000	61	5261	7/64	6/64	1.57	600
950000	61	5431	7/64	6/64	1.59	625
1000000	61	5683	7/64	6/64	1.63	650
1250000	91	6890	8/64	7/64	1.81	675
1500000	91	7874	8/64	7/64	1.94	850
1750000	127	8885	8/64	7/64	2.05	950
2000000	127	9850	8/64	7/64	2.16	1050

General Cable Varnished Cambric Wire and Cable

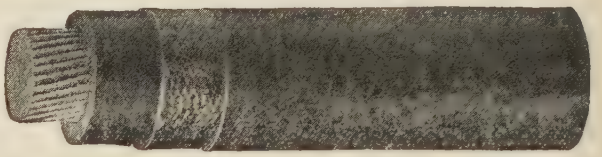
Aerial — Underground — Submarine

Made in accordance with I. P. C. E. A. specifications.

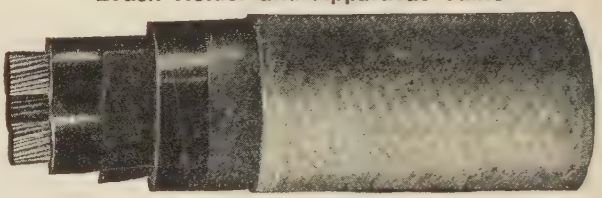
Varnished cambric forms an insulation which is mechanically strong and rugged and will withstand severe strains during installation and service. Not affected by oils and greases and resists corona and ozone attack.

Cables are easily installed; they have high dielectric strength, high permissible operating temperatures, long life and excellent current-carrying capacity. Varnished cambric cables with suitable protective braids are recommended for general interior wiring in stations, substations and industrial plants. For power distribution and transmission a lead sheath is added and for vertical risers in buildings and mine shafts, a steel wire armor is applied. Also available with steel tape armor for park and street illumination and in still other constructions for unusual services and operating conditions.

Switchboard Wire

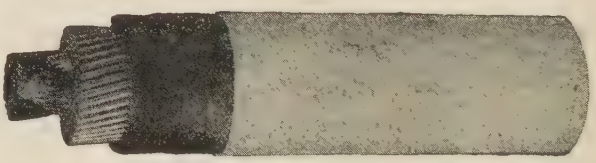


Brush Holder and Apparatus Cable

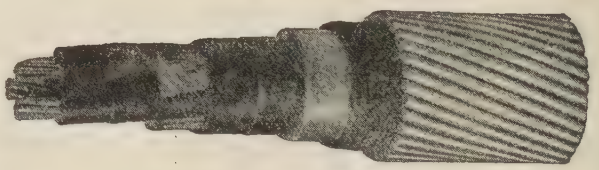


Braided

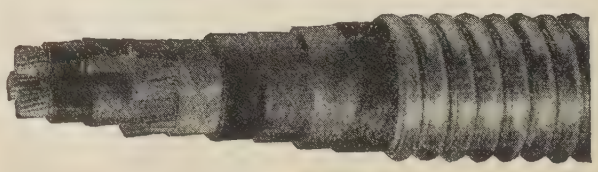
Lead Sheath



Annular Conductors

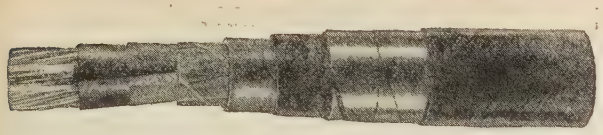


Steel Wire Armor



Interlocking Steel Tape

General Cable Parkway Cable



Parkway cables are used for boulevards, park systems, and street lighting circuits, or wherever an installation is required to be made directly in the earth, without the use of ducts or conduits. Parkway cable is protected from mechanical injury by two dependable plain flat steel tapes, as well as full weight presaturated jute covering thoroughly treated with hot asphaltic compounds.

600 Volts, Solid

Single Conductor

Size A.W.G.	No. of Strands	Rubber Wall Inches	Sheath Inches	Approximate O.D. Inches	Approx. Shipping Wt. Lbs. per 1000 Feet
10	1	3/64	3/64	.670	608
8	1	4/64	3/64	.727	732
6	1	4/64	3/64	.761	835
Duplex Flat					
14	1	3/64	3/64	.845x.657	683
12	1	3/64	3/64	.879x.674	750
10	1	3/64	4/64	.952x.726	1002
8	1	4/64	4/64	1.066x.783	1264
6	1	4/64	4/64	1.134x.817	1432
3-Conductor Round					
14	1	3/64	4/64	.934	1218
12	1	3/64	4/64	.971	1334
10	1	3/64	4/64	1.014	1471
8	1	4/64	4/64	1.138	1850
6	1	4/64	5/64	1.243	2418

600 Volts, Stranded

Single Conductor

6	7	4/64	3/64	.783	884
4	7	4/64	3/64	.831	1036
2	7	4/64	4/64	.922	1446
1	19	5/64	4/64	.993	1680
0	19	5/64	4/64	1.035	1851
00	19	5/64	4/64	1.079	2058
000	19	5/64	4/64	1.156	2298
0000	19	5/64	5/64	1.245	2886
Duplex Flat					
6	7	4/64	4/64	1.178x.839	1531
4	7	4/64	5/64	1.307x.918	2062
2	7	4/64	5/64	1.485x1.038	2718
1	19	5/64	5/64	1.629x1.109	3206
0	19	5/64	6/64	1.740x1.182	3894
00	19	5/64	6/64	1.834x1.227	4326
000	19	5/64	6/64	1.934x1.278	4843
0000	19	5/64	6/64	2.050x1.336	5460
3-Conductor Round					
6	7	4/64	5/64	1.290	2552
4	7	4/64	5/64	1.463	3360
2	7	4/64	5/64	1.582	4044
1	19	5/64	6/64	1.767	5148
0	19	5/64	6/64	1.855	5712
00	19	5/64	6/64	1.952	6360
000	19	5/64	6/64	2.063	7176
0000	19	5/64	7/64	2.219	8640

2500 Volts, Solid

Single Conductor

10	1	7/64	3/64	.795	869
8	1	7/64	3/64	.821	936
6	1	8/64	4/64	.917	1286
Duplex Flat					
10	1	7/64	5/64	1.233x .882	1714
8	1	7/64	5/64	1.276x .908	1860
6	1	8/64	5/64	1.475x1.033	2442
3-Conductor Round					
10	1	7/64	5/64	1.316	2498
8	1	7/64	5/64	1.372	2728
6	1	8/64	5/64	1.571	3589

General Cable Parkway Cable
2500 Volts (Continued)

Stranded

Single Conductor

Protection—2 plain flat steel tapes.

Size A.W.G.	No. of Strands	Rubber Wall Inches	Sheath Inches	Approximate O.D. Inches	Approx. Shipping Wt. Lbs. per 1000 Feet
6	7	8/64	4/64	.939	1357
4	7	8/64	4/64	.987	1532
2	7	8/64	4/64	1.047	1790
1	19	8/64	4/64	1.087	1940
0	19	8/64	4/64	1.153	2118
00	19	8/64	5/64	1.229	2585
000	19	8/64	5/64	1.281	2864
0000	19	8/64	5/64	1.339	3202
Duplex Flat					
6	7	8/64	5/64	1.519x1.055	2573
4	7	8/64	5/64	1.615x1.103	2924
2	7	8/64	6/64	1.766x1.194	3757
1	19	8/64	6/64	1.846x1.234	4094
0	19	8/64	6/64	1.928x1.275	4471
00	19	8/64	6/64	2.018x1.320	4900
000	19	8/64	6/64	2.123x1.372	5438
0000	19	8/64	7/64	2.270x1.462	6547
3-Conductor Round					
6	7	8/64	5/64	1.619	3805
4	7	8/64	6/64	1.754	4740
2	7	8/64	6/64	1.883	5388
1	19	8/64	6/64	1.969	5988
0	19	8/64	6/64	2.057	6564
00	19	8/64	7/64	2.181	7764
000	19	8/64	7/64	2.297	8628
0000	19	8/64	7/64	2.421	9624

3500 Volts

Solid

Single Conductor

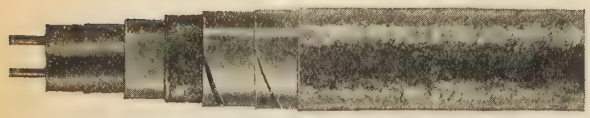
Size A.W.G.	No. of Strands	Rubber Wall Inches	Sheath Inches	Approximate O.D. Inches	Approx. Shipping Wt. Lbs. per 1000 Feet
10	1	9/64	3/64	.857	1000
8	1	9/64	4/64	.914	1254
6	1	9/64	4/64	.948	1375
Duplex Flat					
10	1	9/64	5/64	1.359x .945	2008
8	1	9/64	5/64	1.469x1.030	2365
6	1	9/64	5/64	1.538x1.064	2618
3-Conductor Round					
10	1	9/64	5/64	1.510	3227
8	1	9/64	5/64	1.565	3478
6	1	9/64	5/64	1.638	3854

Stranded

Single Conductor

6	7	9/64	4/64	.970	1446
4	7	9/64	4/64	1.028	1622
2	7	9/64	4/64	1.078	1873
1	19	9/64	4/64	1.143	2028
0	19	9/64	4/64	1.184	2208
00	19	9/64	5/64	1.259	2696
000	19	9/64	5/64	1.312	2976
0000	19	9/64	5/64	1.370	3302
Duplex Flat					
6	7	9/64	5/64	1.581x1.086	2743
4	7	9/64	6/64	1.708x1.166	3426
2	7	9/64	6/64	1.829x1.226	3946
1	19	9/64	6/64	1.908x1.266	4285
0	19	9/64	6/64	1.990x1.307	4666
00	19	9/64	6/64	2.080x1.351	5092
000	19	9/64	7/64	2.216x1.404	6109
0000	19	9/64	7/64	2.332x1.494	6774
3-Conductor Round					
6	7	9/64	6/64	1.716	4440
4	7	9/64	6/64	1.820	5016
2	7	9/64	6/64	1.949	5784
1	19	9/64	6/64	2.035	6264
0	19	9/64	7/64	2.155	7392
00	19	9/64	7/64	2.251	8100
000	19	9/64	7/64	2.363	8952
0000	19	9/64	7/64	2.488	9960

General Cable Parkway Cable
5000 Volts



Protection—2 plain flat steel tapes.

Solid

Single Conductor

Size A.W.G.	No. of Strands	Rubber Wall Inches	Sheath Inches	Approximate O.D. Inches	Approx. Shipping Wt., Lbs. per 1000 Feet
8	1	10/64	4/64	.946	1342
6	1	10/64	4/64	.980	1464
Duplex Flat					
8	1	10/64	5/64	1.533x1.062	2544
6	1	10/64	5/64	1.601x1.096	2796
3-Conductor Round					
8	1	10/64	5/64	1.634	3758
6	1	10/64	6/64	1.738	4494

Stranded

Single Conductor

6	7	10/64	4/64	1.001	1554
4	7	10/64	4/64	1.050	1710
2	7	10/64	4/64	1.135	1956
1	19	10/64	4/64	1.175	2118
0	19	10/64	5/64	1.247	2570
00	19	10/64	5/64	1.292	2807
000	19	10/64	5/64	1.344	3084
0000	19	10/64	5/64	1.443	3610
Duplex Flat					
6	7	10/64	6/64	1.674x1.148	3250
4	7	10/64	6/64	1.772x1.197	3622
2	7	10/64	6/64	1.882x1.257	4134
1	19	10/64	6/64	1.972x1.297	4474
0	19	10/64	6/64	2.054x1.338	4856
00	19	10/64	7/64	2.176x1.415	5744
000	19	10/64	7/64	2.280x1.436	6336
0000	19	10/64	7/64	2.396x1.525	6996
3-Conductor Round					
6	7	10/64	6/64	1.784	4722
4	7	10/64	6/64	1.889	5292
2	7	10/64	6/64	2.018	6060
1	19	10/64	6/64	2.104	6564
0	19	10/64	7/64	2.223	7716
00	19	10/64	7/64	2.320	8424
000	19	10/64	7/64	2.432	9288
0000	19	10/64	7/64	2.557	10296

General Cable Single Strip Steel Armored Cable

Designed to meet requirements for street and boulevard lighting; used in all classes of underground installations requiring insulated copper conductors with a protective covering against mechanical injury. May be used on any type or size conductors, for any standard voltage or under any condition of service ordinarily met with where park cable is used. Used in train control and other service where it is essential to have conductors protected.

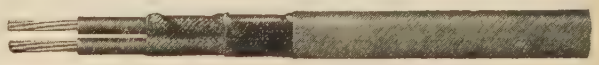
This cable is of single strip construction; arch is designed to give maximum mechanical protection against crushing load and at the same time afford flexibility. Joints operate on a ball and socket plan.

Prices upon application.

General Cable Romex Non-Metallic Sheathed Cable

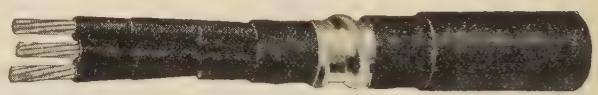
Size of Cable	Approx. Feet per Coil	Approximate Weight Pounds Per 1000 Ft. With Ground Wire	Without Ground Wire	Size of Cable	Approx. Feet per Coil	Approximate Weight Pounds Per 1000 Ft. With Ground Wire	Without Ground Wire
14/2	250	108	104	14/3	200	175	165
12/2	200	135	125	12/3	200	210	200
10/2	200	175	155	10/3	200	270	250
8/2	125	248	240	8/3	125	424	400
6/2	125	392	368	6/3	125	608	576
4/2	125	528	488	4/3	125	832	776

General Cable Enterite Service Drop Cable
600-Volt Type



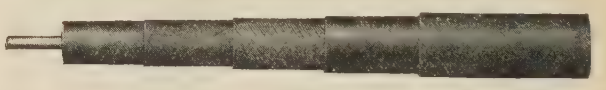
Size A.W.G.	No. of Strands	No. of Conductors	Rubber Wall Thickness Inches	Approx. Overall Diameter Inches	Approx. Weight Pounds per 1000 Ft.
12	1	2	3/64	.505	115
12	7	2	3/64	.525	115
10	1	2	3/64	.545	151
10	7	2	3/64	.570	151
8	1	2	3/64	.600	203
8	7	2	3/64	.635	203
6	7	2	4/64	.770	312
4	7	2	4/64	.870	435
10	1	3	3/64	.585	219
10	7	3	3/64	.610	219
8	7	3	3/64	.675	303
6	7	3	4/64	.825	477
4	7	3	4/64	.930	666

General Cable Armored Service Entrance Cable



Size of Cable	8/2	8/3	6/2	6/3	4/3	2/3
Rubber Wall.....inches	3/64	3/64	4/64	4/64	4/64	4/64
Approx. O.D.....inches	.84	.90	1.00	1.04	1.15	1.28
Approx. Ship. Wt. per 1000 Feet.....pounds	720	810	895	1045	1570	1930

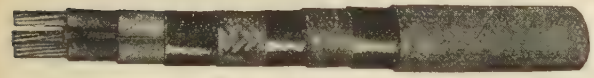
General Cable Barkhide Tree Wire



Solid

Size A.W.G.	Voltage	Ungrounded Neutral: Rubber Wall In.	Ungrounded Neutral: Approx. Overall Diam. In.	Ungrounded Neutral: Approx. Net Wt. Lbs. per 1000 Ft.	Grounded Neutral: Rubber Wall In.	Grounded Neutral: Approx. Overall Diam. In.	Grounded Neutral: Approx. Net Wt. Lbs. per 1000 Ft.
8	3000	6/64	.570	175	5/64	.540	160
6	3000	6/64	.600	215	5/64	.570	200
4	3000	6/64	.640	280	5/64	.610	270
2	3000	6/64	.700	370	5/64	.670	360
6	5000	10/64	.730	260	7/64	.630	230
4	5000	10/64	.770	365	7/64	.680	330
2	5000	10/64	.820	465	7/64	.730	430
Stranded							
2	3000	6/64	.730	390	5/64	.700	380
1	3000	7/64	.800	495	6/64	.770	480
0	3000	7/64	.840	580	6/64	.810	560
00	3000	7/64	.890	685	6/64	.860	660
2	5000	10/64	.860	490	7/64	.760	460
1	5000	10/64	.900	585	7/64	.800	495
0	5000	10/64	.940	655	7/64	.840	580
00	5000	10/64	.980	765	7/64	.890	685

General Cable Trenchlay Cable
Power Type
0-600 Volts



General Cable Trenchlay cable, is the original non-metallic armored cable.

The fundamental principles of Trenchlay are to provide a cable for direct earth installation primarily offering mechanical protection during and after installation.

Trenchlay features in all four types consist of an asbestos braid, a series of Asbestos Base Caulk seals and an improved non-metallic armor.

Size A W G.	No. of Conductors	No. of Strands	Rubber Thickness Inches	Approx. O.D. Inches	Approximate Weight Pounds Per 1000 Feet Net	Shipping
14	1	Solid	3/64	.523	118	158
14	2	Sclid	3/64	.721	188	268
14	3	Solid	3/64	.752	273	353
12	1	Solid	3/64	.540	133	173
12	2	Solid	3/64	.755	217	297
12	3	Solid	3/64	.788	313	533
10	1	Solid	3/64	.561	153	263
10	2	Solid	3/64	.797	255	475
10	3	Solid	3/64	.834	367	587
8	1	Solid	4/64	.618	195	300
8	2	Solid	4/64	.912	336	546
8	3	Solid	4/64	.957	467	670
6	1	7	4/64	.674	253	333
6	2	7	4/64	1.023	469	849
6	3	7	4/64	1.077	676	1056
4	1	7	4/64	.722	346	426
4	2	7	4/64	1.119	607	987
4	3	7	4/64	1.180	879	1259
2	1	7	4/64	.782	448	668
2	2	7	4/64	1.239	823	1203
2	3	7	4/64	1.310	1179	1559
1	1	19	5/64	.853	545	765
1	2	19	5/64	1.444	1006	1606
1	3	19	5/64	1.526	1538	2138
0	1	19	5/64	.896	635	855
0	2	19	5/64	1.530	1174	1774
0	3	19	5/64	1.618	1793	2393
00	1	19	5/64	.941	741	961
00	2	19	5/64	1.620	1393	1993
00	3	19	5/64	1.715	2111	2711
000	1	19	5/64	.991	878	1258
000	2	19	5/64	1.720	1650	2250
000	3	19	5/64	1.823	2513	3113
0000	1	19	5/64	1.051	1051	1431
0000	2	19	5/64	1.840	2055	2655
0000	3	19	5/64	1.952	2991	3591
C M.						
250000	1	37	6/64	1.128	1227	1607
250000	3	37	6/64	2.118	3565	4165
300000	1	37	6/64	1.184	1408	1788
300000	3	37	6/64	2.239	4112	5012
350000	1	37	6/64	1.234	1588	1968
350000	3	37	6/64	2.347	4654	5554
400000	1	37	6/64	1.281	1766	2146
400000	3	37	6/64	2.448	5199	6399
450000	1	37	6/64	1.388	2025	2625
450000	3	37	6/64	2.543	5738	6938
500000	1	37	6/64	1.429	2198	2798
500000	3	37	6/64	2.631	6401	7601
600000	1	61	7/64	1.540	2595	3195
600000	3	61	7/64	2.870	7593	9393
750000	1	61	7/64	1.645	3120	3720
750000	3	61	7/64	3.096	9168	10968
900000	1	61	7/64	1.740	3636	4236
1000000	1	61	7/64	1.799	3975	4575
1250000	1	91	8/64	1.967	4894	5494
1500000	1	91	8/64	2.090	5788	6988
2000000	1	127	8/64	2.309	7487	8687

General Cable Trenchlay Cable
Power Type
Grounded or Ungrounded
2001-3000 Volts

When selecting insulation thicknesses, these cables are rated at operating voltages between phases.

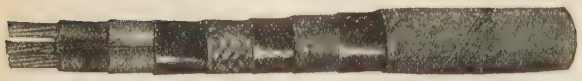
For three phase systems with grounded or ungrounded neutral, use thickness values in accordance with the following table.

For single or two phase systems up to and including 3000 volts, use thickness values in accordance with the following table.

Size A.W.G.	No. of Conductors	No. of Strands	Rubber Thickness Inches	Approx. O.D. Inches	Approx. Weight Pounds per 1000 Feet Net	Shipping
8	1	Solid	7/64	.7125	281	391
8	2	Solid	7/64	1.100	484	864
8	3	Solid	7/64	1.160	698	1078
6	1	7	8/64	.799	369	589
6	2	7	8/64	1.273	662	1042
6	3	7	8/64	1.409	1015	1615
4	1	7	8/64	.847	450	670
4	2	7	8/64	1.369	820	1420
4	3	7	8/64	1.513	1242	1842
2	1	7	8/64	.907	561	781
2	2	7	8/64	1.489	1039	1639
2	3	7	8/64	1.642	1563	2163
1	1	19	8/64	.947	639	859
1	2	19	8/64	1.632	1243	1843
1	3	19	8/64	1.728	1784	2384
0	1	19	8/64	.988	737	1117
0	2	19	8/64	1.714	1427	2027
0	3	19	8/64	1.817	2055	2655
00	1	19	8/64	1.034	850	1230
00	2	19	8/64	1.806	1653	2253
00	3	19	8/64	1.916	2389	2989
000	1	19	8/64	1.085	989	1369
000	2	19	8/64	1.908	1927	2527
000	3	19	8/64	2.026	2818	3418
0000	1	19	8/64	1.143	1168	1548
0000	2	19	8/64	2.024	2265	2865
0000	3	19	8/64	2.151	3328	4228
C.M.						
250000	1	37	9/64	1.221	1352	1732
250000	3	37	9/64	2.219	3852	4752
300000	1	37	9/64	1.276	1540	1920
300000	3	37	9/64	2.437	4425	5625
350000	1	37	9/64	1.390	1787	2387
350000	3	37	9/64	2.547	4990	6190
400000	1	37	9/64	1.437	1971	2571
400000	3	37	9/64	2.649	5684	6884
450000	1	37	9/64	1.481	2155	2755
450000	3	37	9/64	2.743	6236	7436
500000	1	37	9/64	1.522	2336	2936
500000	3	37	9/64	2.834	6772	8572
600000	1	61	9/64	1.602	2698	3298
600000	3	61	9/64	3.004	7857	9657
750000	1	61	9/64	1.707	3231	3831
750000	3	61	9/64	3.230	9455	11255
900000	1	61	9/64	1.802	3759	4359
1000000	1	61	9/64	1.861	4105	4705
1250000	1	91	10/64	2.030	5058	5658
1500000	1	91	10/64	2.153	5914	7114
2000000	1	127	10/64	2.372	7639	8839

General Cable Trenchlay Cable Power Type

Grounded—Between Conductors 3001-4000 Volts



When selecting insulation thicknesses, these cables are rated at operating voltages between phases.

For 3 phase systems with grounded or ungrounded neutral, use thickness values in accordance with the following table.

For single or two phase systems up to and including 4000 volts, use thickness values in accordance with the following table.

Size A.W.G.	No. of Conductors	No. of Strands	Rubber Thickness Inches	Approx. O.D. Inches	Approx. Weight Pounds Per 1000 Feet Net	Approx. Weight Pounds Per 1000 Feet Shipping
8	1	Solid	9/64	.7745	326	516
9	2	Solid	9/64	1.224	575	955
9	3	Solid	9/64	1.294	825	1205
6	1	7	9/64	.830	396	616
6	2	7	9/64	1.335	716	1096
6	3	7	9/64	1.476	1083	1683
4	1	7	9/64	.878	472	692
4	2	7	9/64	1.431	865	1465
4	3	7	9/64	1.580	1303	1903
2	1	7	9/64	.938	589	809
2	2	7	9/64	1.614	1154	1754
2	3	7	9/64	1.709	1644	2244
1	1	19	9/64	.978	674	894
1	2	19	9/64	1.694	1301	1901
1	3	19	9/64	1.795	1864	2464
0	1	19	9/64	1.021	768	1148
0	2	19	9/64	1.780	1486	2086
0	3	19	9/64	1.888	2141	2741
00	1	19	9/64	1.066	887	1267
00	2	19	9/64	1.870	1722	2322
00	3	19	9/64	1.985	2493	3093
000	1	19	9/64	1.116	1027	1407
000	2	19	9/64	1.970	1990	2590
000	3	19	9/64	2.092	2917	3517
0000	1	19	9/64	1.176	1205	1585
0000	2	19	9/64	2.090	2333	2933
0000	3	19	9/64	2.221	3433	4333
C. M.						
250000	1	37	10/64	1.253	1391	1771
250000	3	37	10/64	2.388	3969	5269
300000	1	37	10/64	1.309	1589	1969
300000	3	37	10/64	2.508	4540	5740
350000	1	37	10/64	1.422	1829	2429
350000	3	37	10/64	2.616	5252	6452
400000	1	37	10/64	1.469	2016	2616
400000	3	37	10/64	2.717	5809	7009
450000	1	37	10/64	1.513	2202	2802
450000	3	37	10/64	2.812	6366	7566
500000	1	37	10/64	1.554	2382	2982
500000	3	37	10/64	2.900	6905	8705
600000	1	61	10/64	1.634	2747	3347
600000	3	61	10/64	3.073	7997	9797
750000	1	61	10/64	1.739	3285	3885
900000	1	61	10/64	1.834	3811	4411
1000000	1	61	10/64	1.893	4169	4759
1250000	1	91	11/64	2.061	5119	5719
1500000	1	91	11/64	2.179	5980	7180
2000000	1	127	11/64	2.403	7711	8911

General Cable Trenchlay Cable Power Type

Grounded—Between Conductors 4001-5000 Volts

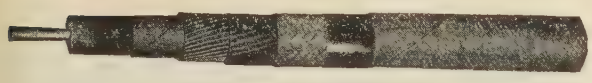
When selecting insulation thicknesses, these cables are rated at operating voltages between phases.

For three phase systems with grounded or ungrounded neutral, use thickness values in accordance with the following table.

For single or two phase systems up to and including 5000 volts, use thickness values in accordance with the following table.

Size A.W.G.	No. of Conductors	No. of Strands	Rubber Thickness Inches	Approx. O.D. Inches	Approx. Weight Pounds Per 1000 Feet Net	Approx. Weight Pounds Per 1000 Feet Shipping
8	1	Solid	10/64	.8065	349	539
8	2	Solid	10/64	1.288	623	1003
8	3	Solid	10/64	1.425	956	1556
6	1	7	10/64	.862	420	640
6	2	7	10/64	1.399	766	1366
6	3	7	10/64	1.545	1154	1754
4	1	7	10/64	.910	500	720
4	2	7	10/64	1.495	917	1517
4	3	7	10/64	1.648	1380	1980
2	1	7	10/64	.970	618	838
2	2	7	10/64	1.678	1207	1807
2	3	7	10/64	1.778	1726	2326
1	1	19	10/64	1.010	704	1084
1	2	19	10/64	1.758	1357	1957
1	3	19	10/64	1.864	1953	2553
0	1	19	10/64	1.053	801	1181
0	2	19	10/64	1.844	1547	2147
0	3	19	10/64	1.956	2224	2824
00	1	19	10/64	1.098	924	1304
00	2	19	10/64	1.934	1776	2376
00	3	19	10/64	2.054	2595	3195
000	1	19	10/64	1.148	1067	1447
000	2	19	10/64	2.034	2057	2657
000	3	19	10/64	2.161	3019	3919
0000	1	19	10/64	1.208	1248	1623
0000	2	19	10/64	2.154	2401	3301
0000	3	19	10/64	2.291	3540	4440
C.M.						
250000	1	37	11/64	1.284	1428	1808
250000	3	37	11/64	2.455	4084	5284
300000	1	37	11/64	1.402	1678	2278
300000	3	37	11/64	2.573	4655	5855
350000	1	37	11/64	1.453	1871	2471
350000	3	37	11/64	2.683	5376	6576
400000	1	37	11/64	1.500	2058	2658
400000	3	37	11/64	2.784	5939	7739
450000	1	37	11/64	1.544	2235	2835
450000	3	37	11/64	2.879	6468	8368
500000	1	37	11/64	1.586	2426	3026
500000	3	37	11/64	2.970	7037	8937
600000	1	61	11/64	1.665	2794	3394
750000	1	61	11/64	1.770	3336	3936
900000	1	61	11/64	1.865	3867	4467
1000000	1	61	11/64	1.924	4216	4816
1250000	1	91	12/64	2.092	5181	6381
1500000	1	91	12/64	2.215	6044	7244
2000000	1	127	12/64	2.434	7783	8983

General Cable Trenchlay Cable Concentric Type



2001-3000 Volts

Size A.W.G.	Stranding Inner Conductor	Wall Thickness Inches	Concentric Serving	Approx. O.D. Inches	Approx. Weight Pounds Per 1000 Feet Net	Shipping
8	Solid	7/64	24/#21	.677	327	427
6	Solid	8/64	24/#19	.757	436	516
6	7/61.2	8/64	24/#19	.779	453	653
4	Solid	8/64	24/#17	.818	572	772
4	7/77.2	8/64	24/#17	.846	592	792
2	7/97.4	8/64	24/#15	.929	810	1010
1	19/66.4	8/64	24/#14	.983	954	1154

4001-5000 Volts

8	Solid	10/64	24/#20	.778	411	611
6	Solid	10/64	24/#19	.819	483	683
6	7/61.2	10/64	24/#19	.841	500	700
4	Solid	10/64	24/#17	.880	625	825
4	7/77.2	10/64	24/#17	.908	647	847
2	7/97.4	10/64	24/#15	.992	863	1063
1	19/66.4	10/64	24/#14	1.046	1013	1413

7001-8000 Volts

8	Solid	12/64	24/#19	.848	480	680
6	Solid	12/64	24/#18	.891	564	764
6	7/61.2	12/64	24/#18	.913	584	784
4	Solid	12/64	24/#17	.943	679	879
4	7/77.2	12/64	24/#17	.971	703	903
2	7/97.4	12/64	24/#15	1.054	922	1322
1	19/66.4	12/64	24/#14	1.108	1069	1469

11001-12000 Volts
Grounded Neutral Power Circuits Only

8	Solid	16/64	24/#18	.982	632	832
6	Solid	16/64	24/#17	1.026	718	1118
6	7/61.2	16/64	24/#17	1.048	743	1143
4	Solid	16/64	24/#16	1.079	839	1239
4	7/77.2	16/64	24/#16	1.107	867	1267
2	7/97.4	16/64	24/#15	1.179	1055	1455
1	19/66.4	16/64	24/#14	1.296	1262	1662

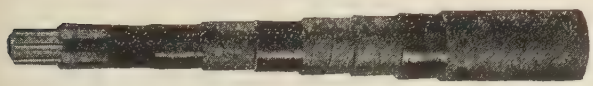
General Cable Trenchlay Cable Control Type

General Cable Control Type Trenchlay embodies all the advantageous structural features of power type Trenchlay. It is intended for direct earth installation for control circuits requiring several conductors. Each conductor is easily identified by the use of colored braids or colored markers in the braids.

Standard sizes are Nos. 14, 12 and 9 A.W.G. in stranded construction.

For structural details, tests, etc. ask for Specification No. 3104.

General Cable Trenchlay Cable Railway Signal Type



General Cable Railway Signal Type Trenchlay offers a variety of uses on multiple conductor or single conductor circuits because it is constructed for direct earth installation use in ducts or as an aerial cable. Unlike the other types of Trenchlay, this cable employs a tough weatherproof Sisal braid as an outer covering and can be flame-proofed if desired.

For structural details, tests, etc. ask for Specification No. 3204.

General Cable Super Service Cable

Super Service Cable has unusual tensile strength, durability and capacity to stand severe abrasion; the smooth, dense, sturdy hide will give long service on any job.

Cannot be kinked. This cable is tough, flexible, waterproof and highly resistant to oil or acid.

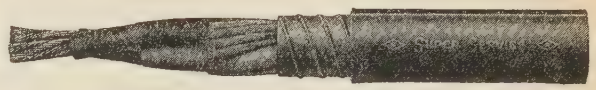
The name is embossed every 20 feet in the rubber jacket. Two lateral fins or ridges along opposite sides of cord mark the places where vulcanizing molds come together.

Single Conductor—600-Volt Insulation

Used on mine locomotives, cutting machines, electric shovels, draglines, dredges, power leads, emergency cables, grounding leads, loading machines, conveyors, lifting magnets, cranes and welding equipment where safety and hard usage are important factors.

Size A.W.G.	Stranding	Allowable Cap. Amps.	O.D. In.	Size A.W.G.	Stranding	Allowable Cap. Amps.	O.D. In.
14	84/#33	15	.300	3	49/#20	80	.625
12	84/#31	20	.300	3	133/#24	80	.625
10	105/#30	25	.300	2	133/#23	90	.675
8	49/#25	35	.400	2	259/#26	90	.675
6	49/#23	50	.500	1	133/#22	100	.675
6	133/#27	50	.500	1	259/#25	100	.675
5	49/#22	60	.562	0	259/#24	125	.750
5	133/#26	60	.562	00	259/#23	150	.800
4	49/#21	70	.562	000	259/#22	175	.850
4	133/#25	70	.562	0000	259/#21	225	.900

Twisted Conductor—600-Volt Insulation



In the twisted conductor cable the construction is similar to the cord with the exception that the copper conductors are tinned and have the same stranding as other cables. Polarity is indicated by rubber filled tapes of distinctive colors applied over the individual conductors. For instance, the 3-conductor cable is colored with black, white and red rubber tapes. However, on 4 and more conductor cables Size No. 6 and heavier, polarity is indicated by covering one conductor with red tape and all others with black tape. Polarity can then be readily recognized by counting from the red conductor.

2 Conductors

Size A.W.G	Stranding	Allowable Cap. Amps.	O.D. In.	Size A.W.G.	Stranding	Allowable Cap. Amps.	O.D. In.
8	133/#29	35	.750	1	133/#22	100	1.400
6	49/#23	50	.950	0	259/#24	125	1.600
6	133/#27	50	.950	00	259/#23	150	1.700
4	49/#21	70	1.050	000	259/#22	175	1.800
3	133/#24	80	1.150	0000	259/#21	225	1.900
2	133/#23	90	1.250	....	.....	...	.....

3 Conductors

8	133/#29	35	.850	1	133/#22	100	1.600
6	49/#23	50	1.050	0	259/#24	125	1.700
6	133/#27	50	1.050	00	259/#23	150	1.800
4	49/#21	70	1.150	000	259/#22	175	1.900
3	133/#24	80	1.250	0000	259/#21	225	2.100
2	133/#23	90	1.300	....	.....	...	.....

4 Conductors

8	133/#29	35	.950	6	133/#27	50	1.100
6	49/#23	50	1.100	4	49/#21	70	1.250

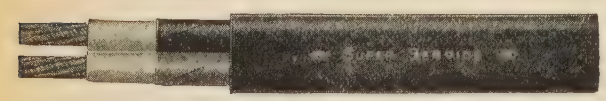
General Cable Super Service Concentric Cable

2 Conductor

Used almost exclusively in mines on cutting machines and locomotives; flexible and economical to handle.

Size A.W.G.	Strand-ing	Allowable Cap. Amps.	O.D. In.	Size A.W.G.	Strand-ing	Allowable Cap. Amps.	O.D. In.
6	49/#23	50	.750	2	133/#23	90	.950
4	49/#21	70	.850	1	133/#22	100	1.000
3	133/#24	80	.900	.	.....	...	.....

General Cable Super Service Parallel Duplex Mining Cables



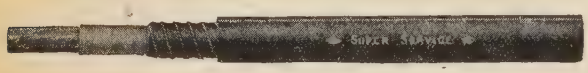
This cable is approved by the U. S. Bureau of Mines for use on explosion-proof equipment.

Used chiefly in the mines on cutting machines and also for charging cable in industrial plants.

Size A.W.G.	Strand-ing	Allowable Cap. Amps.	O.D. In.	Size A.W.G.	Strand-ing	Allowable Cap. Amps.	O.D. In.
6	49/#23	50	.950x.575	2	133/#23	90	1.250x.750
4	49/#21	70	1.000x.625	1	133/#22	100	1.421x.812
3	133/#24	80	1.109x.675	.	.....	...	.....

General Cable Super Service Welding Cable

Single Conductor—600-Volt Insulation



Recommended wherever a flexible portable cable is required.

Extreme flexibility is obtained by the large number of fine bare copper wires, rope stranded. This obviates the necessity of splicing additional lengths for electrode holders and assures freedom of wrist movement in the welding operation. This cable is waterproof; it coils easily, lies flat and does not kink or tangle.

Size A.W.G.	*Strand-ing	Allowable Cap. Amps.	O.D. In.	Size A.W.G.	*Strand-ing	Allowable Cap. Amps.	O.D. In.
5	1323/#36	55	.450	0	2646/#34	125	.675
4	1323/#35	70	.500	00	3332/#34	150	.750
3	1666/#35	80	.500	000	4214/#34	175	.800
2	1666/#34	90	.562	0000	5292/#34	225	.900
1	2107/#34	100	.625	....	.....	...	....

*Bare copper, cotton separator.

General Cable Super Service Grounding Cable

5000-Volt Rating

Used in the field for temporary grounding of lines while undergoing repairs. The ground clamp with cable attached is hooked on the line by means of a grounding stick, the other end having previously been connected to ground either by clamping to transmission tower or when working on a pole, to any temporary ground connection available. Also used in generating stations and substations for grounding apparatus during repairs.

Tests indicate that cable can be safely used to ground lines up to 132000 volts (system phase to ground potential).

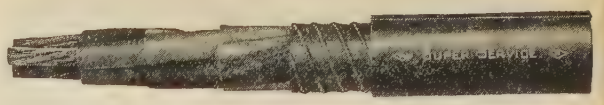
Cable is flexible and easy to handle. Outer rubber jacket is tough and durable, waterproof and highly resistant to oils and acids. Withstands hard service.

Size A.W.G.	*Strand-ing	O.D. In.	Approx. Net Wt. Lbs.	Size A.W.G.	*Strand-ing	O.D. In.	Approx. Net Wt. Lbs.
4	133/#25	.675	338	1	133/#22	.800	527
3	133/#24	.750	409	0	259/#24	.850	611
2	133/#23	.750	447	00	259/#23	.900	719

*Tinned copper.

General Cable Super Service High Voltage Cable

3 Conductors



This cable offers remarkable wearing qualities under the most adverse conditions and also possesses exceptional resistance to the corona action, set up by the high tension currents, which has been the source of so much trouble with cables in the past.

Corona action is caused by current leakage through the insulation. The current leakage changes the oxygen in the air to two parts oxygen or ozone. Ozone is one of the most active agents in deteriorating rubber and its presence on the surface of the cable will quickly break down the rubber jacket. This danger has been practically eliminated in Super Service High Voltage Cable by the corona-resisting compound used on the individual conductors and the combination of ground strands which carry off the leakage.

2500 Volt Insulation

Size A.W.G.	Stranding Conductors	Ground Wires	O.D. Inches	Approx. Gross Wt. Lbs. per 1000 Feet
8	49/#25	3x 49/#30	1.250	1120
6	49/#23	3x 49/#28	1.400	1320
4	49/#21	3x133/#30	1.500	2000
3	133/#24	3x133/#29	1.600	2280
2	133/#23	3x133/#28	1.700	2555
1	133/#22	3x133/#27	1.900	2965
0	259/#24	3x133/#26	2.000	3470
00	259/#23	3x133/#25	2.100	3870
000	427/#24	3x133/#24	2.200	4450
0000	427/#23	3x133/#23	2.300	5875
		3500 Volt Insulation		
8	49/#25	3x 49/#30	1.300	1450
6	49/#23	3x 49/#28	1.500	2010
4	49/#21	3x133/#30	1.600	2380
3	133/#24	3x133/#29	1.700	2550
2	133/#23	3x133/#28	1.800	2790
1	133/#22	3x133/#27	2.000	3070
0	259/#24	3x133/#26	2.100	3580
00	259/#23	3x133/#25	2.200	4010
000	427/#24	3x133/#24	2.300	5285
0000	427/#23	3x133/#23	2.400	6020
		5000 Volt Insulation		
8	49/#25	3x 49/#30	1.500	1707
6	49/#23	3x 49/#28	1.700	2275
4	49/#21	3x133/#30	1.800	2620
3	133/#24	3x133/#29	1.900	2790
2	133/#23	3x133/#28	2.000	3230
1	133/#22	3x133/#27	2.100	3520
0	259/#24	3x133/#26	2.100	3880
00	259/#23	3x133/#25	2.300	5095
000	427/#24	3x133/#24	2.400	5605
0000	427/#23	3x133/#23	2.500	6300

4 Conductors

2500 Volt Insulation

Size A.W.G.	Strand-ing Conduc-tors	O.D. In.	Approx. Gross Wt. Lbs. per 1000 Ft.	Size A.W.G.	Strand-ing Conduc-tors	O.D. In.	Approx Gross Wt. Lbs. per 1000 Ft.
8	49/#25	1.500	1215	1	133/#22	2.100	3520
6	49/#23	1.600	1775	0	259/#24	2.200	3925
4	49/#21	1.700	2350	00	259/#23	2.300	5235
3	133/#24	1.800	2565	000	427/#24	2.500	5815
2	133/#23	1.900	2865	...	.....	.....	....
			5000 Volt Insulation				
8	49/#25	1.700	1949	2	133/#23	2.100	3590
6	49/#23	1.800	2475	1	133/#22	2.300	4740
4	49/#21	2.000	3065	0	259/#24	2.400	5135
3	133/#24	2.100	3290	00	259/#23	2.500	5660

General Cable Super Service Portable Cords

Type S—2 Conductors

For portable electric tools such as drills, hammers, grinders, buffers, chucks, reamers, riveters and saws; also trouble lamps, solder irons, sand cutters (foundry), conveyors, portable loaders, compressors, microphone and movie-tone installations, electric heating devices, floor scrubbers, train control devices, portable blowers, blasting devices, hoists, concrete mixers, pumps, refrigerators, stage lights and any other type of portable tools or machinery where the cord is subjected to hard usage.

Nos. 16 and 18 with 1/32-inch insulations are rated for 300-volt service. Any number of conductors can be used up to an outside cable diameter of 2½ inches.

Size A.W.G.	Stranding	Allowable Capacity Amperes	O.D. Inches
Type S—2 Conductors			
18	42/#34	3	.400
16	70/#34	6	.421
14	84/#33	15	.562
12	84/#31	20	.625
10	105/#30	25	.675
Type S—3 Conductors			
18	42/#34	3	.421
16	70/#34	6	.450
14	84/#33	15	.625
12	84/#31	20	.675
10	105/#30	25	.800
Type S—4 Conductors			
18	42/#34	3	.500
16	70/#34	6	.562
14	84/#33	15	.675
12	84/#31	20	.750
10	105/#30	25	.850
Type SJ Junior—2 Conductors			
18	42/#34	3	.300
16	70/#34	5	.354
Type SJ Junior—3 Conductors			
18	42/#34	3	.354
16	70/#34	5	.400

General Cable Supertex Rubber Lamp Cords

Supertex is a new type of lamp cord insulated with a thin covering of high grade colored rubber in place of the usual cotton or rayon braids. Furnished in 4 standard colors, sizes Nos. 16 and 18 only. The unique construction of the rubber sheath protects and at the same time separates the 2 conductors.

This is the ideal cord for hotels, dormitories, clubs, asylums and hospitals. Recommended for use on all types of household extension lamps, electric clocks, instrument cords, dental and hospital equipment, electric fans and toys. Greatly reduces cord difficulties and practically eliminates costly labor charges for repair and replacement.

To strip ends twist cord, to loosen sheath from conductors pull sheath beyond conductors as far as desired, cut off sheath while stretched, allow sheath to slip back to its original position exposing ends of conductors and strip conductors in usual way.

	18	16
Size A.W.G.		
Stranding	41/#34	65/#34
Shipping Weight.....pounds	31	38

General Cable Bare Copper Wire

Solid Conductor—Annealed or Hard Drawn

These wires are drawn accurately to gauge according to specification. They are of the highest conductivity and greatest tensile strength. Regularly drawn to A.W.G. and annealed, and all orders will be filled accordingly, unless otherwise stated.

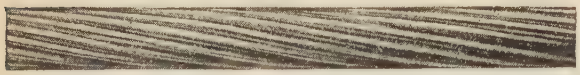
Size A.W.G.	Diameter Inches	Cap. C. M.	Weight, Pounds Per 1000 Ft.	Per Mile	Std. Pkg. in Coil Pounds
0000	.460	211600	640.5	3382	250
000	.410	167800	507.9	2682	250
00	.365	133100	402.8	2127	250
0	.325	105500	319.5	1687	250
1	.289	83690	253.3	1337	250
2	.258	66370	200.9	1061	250
3	.229	52640	159.3	841	250
4	.204	41740	126.4	667	250
5	.182	33100	100.2	529	250
6	.162	26250	79.46	420	250
7	.144	20820	63.02	333	250
8	.128	16510	49.98	264	250
9	.114	13090	39.63	209	250
10	.102	10380	31.43	166	250
11	.091	8234	24.92	132	250
12	.081	6530	19.77	104	250
13	.072	5178	15.68	83	250
14	.064	4107	12.43	66	250
15	.057	3257	9.858	52	250
16	.051	2583	7.818	41	100
17	.045	2048	6.200	33	100
18	.040	1624	4.917	26	100
19	.036	1288	3.899	21	50
20	.032	1022	3.092	16	50

Approximate Breaking Weight in Pounds

Size A.W.G.	Annealed Actual Strength	Annealed Per Sq. In.	Hard-Drawn Actual Strength	Hard-Drawn Per Sq. In.
0000	5983	36000	8143	49000
000	4755	36000	6722	51000
00	3763	36000	5519	52800
0	2984	36000	4517	54500
1	2432	37000	3688	56100
2	1929	37000	3003	57600
3	1530	37000	2439	59000
4	1213	37000	1970	60100
5	962	37000	1591	61200
6	763	37000	1280	62100
7	605	37000	1030	63000
8	480	37000	826	63700
9	380	37000	661	64300
10	314	38500	529	64900
11	249	38500	423	65400
12	197	38500	337	65700
13	157	38500	268	65900
14	124	38500	214	66200
15	98	38500	170	66400
16	78	38500	135	66600
17	62	38500	107	66800
18	49	38500	85	67000
19	39	38500	68	67200
20	31	38500	54	67400

General Cable Bare Copper Wire

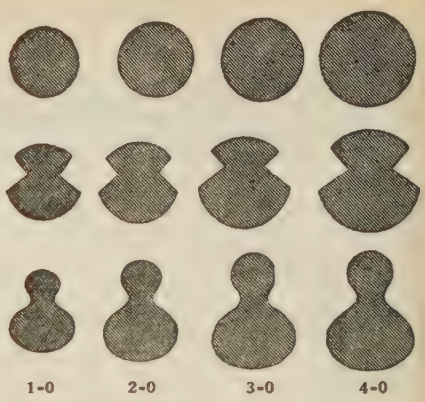
Concentric Strands



Size C. M.	Weight, Pounds per 1000 Feet	Weight, Pounds Per Mile	Various Methods of Stranding Diam. in Mils when Composed of 3 Wires	7 Wires	12 Wires
2000000	6175	32604	.....	535	408
1750000	5403	28529	.....	500	382
1500000	4631	24453	.....	463	354
1250000	3859	20378	.....	423	323
1000000	3088	16302	.....	378	289
950000	2933	15487	.....	368	281
900000	2779	14672	.....	359	274
850000	2624	13857	.....	348	267
800000	2470	13042	.....	338	258
750000	2316	12227	.....	327	250
700000	2161	11412	.....	316	242
650000	2007	10596	.....	305	233
600000	1853	9781	.....	293	224
550000	1698	8966	.....	280	214
500000	1544	8151	.....	267	204
450000	1389	7336	.....	253	194
400000	1235	6521	.....	239	183
350000	1080	5706	.....	224	171
300000	926	4891	.....	207	158
250000	772	4076	.....	189	144
A.W.G.					
0000	653	3450	.....	174	133
000	518	2736	.....	155	118
00	411	2169	.....	138	105
0	326	1720	.....	123	94
1	258	1364	167	109	83
2	205	1082	149	97	75
3	163	858	132	87	66
4	129	681	118	77	59
5	102	540	105	69	52.5
6	81	428	93.5	61.2	46.8
8	51	269	74.2	48.6	37.0
10	32	169	58.8	38.6	29.4
12	20	107	.....	30.6	23.4
14	13	67	.....	24.4	18.5

Size C. M.	Various Methods of Stranding Diam. in Mils when Composed of 19 Wires	27 Wires	37 Wires	61 Wires	91 Wires
2000000	324	272	232	181	148
1750000	303	254	217	169	139
1500000	281	235	201	157	128
1250000	256	215	184	142	117
1000000	229	192	164	128	105
950000	224	187	160	125	102
900000	218	182	156	121	100
850000	211	177	152	118	97
800000	205	172	147	115	94
750000	199	167	143	111	91
700000	192	161	138	107	88
650000	185	155	133	103	84
600000	178	149	127	99	81
550000	170	142	122	95	78
500000	162	136	116	91	74
450000	154	129	110	86	70
400000	145	122	104	81	66
350000	136	114	97	76	62
300000	126	105	90	70	57.4
250000	115	96	82	64	52.4
A.W.G.					
0000	106	86	76	59.8	48.2
000	94	79	67	52.5	43.0
00	84	70	60	46.7	38.3
0	75	62.6	53.4	41.6	34.1
1	66	55.6	47.5	37.0	30.3
2	59.2	49.7	42.4	33.0	27.1
3	52.5	44.1	37.7	29.3	24.0
4	46.8	39.3	33.5	26.1	21.4
5	41.8	35.0	29.9	23.3	19.1
6	37.2	31.2	26.6	20.7	17.0
8	29.4	24.6	21.1	16.4	13.4
10	23.4	19.6	16.8	13.1	10.7
12	18.6	15.6	13.3	10.4	8.5
14	14.7	12.3	10.5	8.2	6.7

Trolley Wire



Round Section

Size A. W. G.	Diam. Mils	Wt., Lbs. per 1000 Feet	Wt., Lbs. per Mile	Ohms per 1000 Ft.	Ohms per Mile
0000	460	640.5	3382	.0504	.2663
000	410	507.9	2682	.0636	.3359
00	365	402.8	2127	.0802	.4235
0	325	319.5	1687	.1011	.5340

Grooved Section

Size A. W. G.	Depth Mils	Thickness in Mils of Upper Lobe	Lower Lobe	Web
0000	482	376	482	250
000	430	340	429	220
00	392	318	388	200
0	360	246	352	138

Figure 8 Section

0000	600	250	450	150
000	540	222	400	130
00	480	196	352	108
0	420	175	312	106

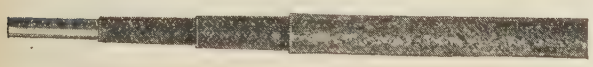
General Cable Unit Package Splicing and Jointing Materials

For convenience of customers, the complete materials required for splices and joints on all types of cable are put up in handy unit package form. By purchasing splicing and jointing materials in this manner, an accumulation of dead stock in the store room is prevented and the time and expense of buying the various items required for the work from more than one source is saved.

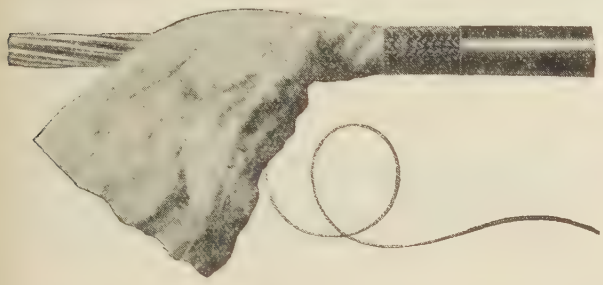
When ordering, specify number and size of conductors, thickness of insulation and lead sheath and voltage rating.

General Cable Weatherproof Wire and Cable "O.K." URC Peerless

"O.K." Type



URC Type



Peerless Type

Peerless type furnished in sizes up to and including 1000000 C.M.

Solid

Size A.W.G.	Wt. Lbs. Per 1000 Ft. D.B.	Wt. Lbs. Per 1000 Ft. T.B.	Std. Pkg. Reels Ft.	Std. Pkg. Coils Ft.	Approx. Net Wt. Lbs. Per Reel D.B.	Approx. Net Wt. Lbs. Per Reel T.B.	Approx. Net Wt. Lbs. Per Coil D.B.	Approx. Net Wt. Lbs. Per Coil T.B.
0000	723	767	2500	....	1808	1920	...	...
000	587	629	3000	....	1761	1890	...	...
00	467	502	3500	....	1635	1760	...	...
0	377	407	4000	....	1508	1630	...	...
1	294	316	990	495	290	310	145	155
2	239	260	1240	620	295	320	150	160
3	185	199	1600	753	295	320	150	160
4	151	164	1980	990	295	320	150	160
5	122	135	2000	1260	244	270	154	170
6	100	112	3150	1575	315	350	160	175
* 8	66	75	5000	2500	330	370	165	185
9	54	62	....	....	....	....	...	...
* 10	46	53	6400	3970	295	340	180	210
* 12	30	35	....	....	....	....	...	...
* 14	20	25	....	....	....	....	...	...

*Also furnished in bundles; double or triple braid, 100 pounds to a bundle.

Stranded

Size C.M.	Wt. Lbs. Per 1000 Ft. D.B.	Wt. Lbs. Per 1000 Ft. T.B.	Standard Package Reels Feet	Approx. Net Wt. Lbs. Per Reel D.B.	Approx. Net Wt. Lbs. Per Reel T.B.
2000000	6690	7008	500	3345	3504
1750000	5894	6193	600	3536	3716
1500000	5098	5380	700	3569	3766
1250000	4264	4508	800	3411	3606
1000000	3456	3674	900	3110	3300
900000	3127	3332	1000	3127	3332
800000	2799	2992	1000	2799	3000
750000	2635	2822	1100	2899	3104
700000	2471	2650	1200	2965	3180
600000	2093	2235	1500	3140	3340
500000	1765	1894	2000	3530	3788
450000	1601	1724	2000	3202	3448
400000	1436	1553	2000	2872	3106
350000	1248	1345	2000	2496	2690
300000	1083	1174	2000	2166	2350
250000	907	985	2500	2268	2460
A.W.G.					
0000	745	800	2500	1863	2000
000	604	653	3000	1812	1960
00	482	522	3500	1687	1830
0	388	424	4000	1552	1700
1	303	328	1000	303	328
2	246	270	1250	308	338
3	190	206	1500	285	309
4	155	170	2000	310	340
5	126	140	2000	252	280
6	103	115	3000	309	345
8	68	78	4000	272	312

General Cable Slow-Burning Triple Braided Wire

Solid

All 3 braids of cotton are thoroughly saturated with white fireproof compound. The compound used on the outer braid becomes very hard, but still the wire retains its flexibility. As this insulation does not deteriorate in a continued high temperature, it is especially suitable for engine and boiler rooms, furnaces and foundries.

Size A.W.G.	Approximate Diameter Over Insulation Inches	Weight, Pounds Per 1000 Ft.	Weight, Pounds Per Mile	Approx. Net Wt. Lbs. Per Reel
0000	3/4	925	4890	2310
000	23/32	760	4020	2280
00	19/32	600	3170	2100
0	17/32	495	2610	1980
0000	3/4	925	4890	300
000	23/32	760	4020	300
00	19/32	600	3170	300
0	17/32	495	2610	310
1	15/32	365	1930	360
2	7/16	320	1690	400
4	3/8	220	1160	435
6	5/16	160	845	500
8	9/32	100	530	*100
10	1/4	80	420	*100
12	7/32	55	290	*100
14	3/16	40	210	*100

*Approximate weight per bundle.

Stranded

Size A.W.G.	Approximate Diameter Over Insulation Inches	Weight, Pounds Per 1000 Ft.	Weight, Pounds Per Mile	Approx. Net Wt. Lbs. Per Reel
0000	27/32	960	5070	2400
000	25/32	785	4150	2355
00	21/32	625	3300	2190
0	19/32	510	2700	2040
0000	27/32	960	5070	400
000	25/32	785	4150	395
00	21/32	625	3300	360
0	19/32	510	2700	340
1	17/32	380	2000	300
2	1/2	335	1770	335
3	15/32	280	1480	335
4	7/16	230	1220	340
5	3/8	195	1030	390
6	11/32	165	870	410
8	9/32	105	555	370

General Cable Feeder Cable

Size C.M.	Approximate Diameter Over Insulation Inches	Weight, Pounds Per 1000 Ft.	Weight, Pounds Per Mile	Approx. Net Wt. Lbs. Per Reel
1000000	1 5/8	3980	21000	3580
800000	1 17/32	3280	17300	3280
700000	1 7/16	2920	15400	3500
600000	1 9/32	2460	13000	3690
500000	1 1/32	2080	11000	3740
400000	1 3/32	1700	9000	2550
350000	31/32	1500	7900	2700
300000	15/16	1310	6900	2620
250000	7/8	1120	5900	2800

Tirex Rubber Armored Cable

The flexible copper conductors are insulated with a rubber compound of high dielectric strength containing a minimum of 30 per cent of new Para rubber.

The inner jacket is a 40 per cent Para rubber compound and fills the interstices between the conductors.

The outer jacket or rubber armor contains a high percentage of new Para rubber and is securely locked to the cable.

A double reinforcement of hard twisted seine twine between the jackets adds greatly to the wearing qualities of Tirex Cables.

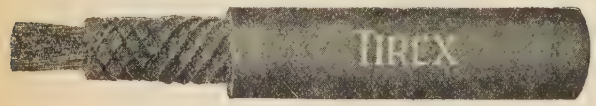
The outer covering or rubber armor effectively protects the cable and safeguards the user.

Tirex Cables, being all rubber, do not absorb moisture and are not appreciably affected by oils or acids under ordinary industrial conditions.

Tirex Single Cable—600 Volts

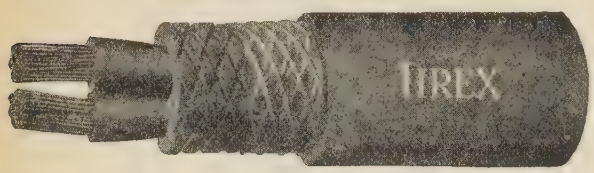
For use wherever a single conductor portable cable is needed. Specially suitable for electric mine locomotives of the gathering reel type when it is necessary to leave the trolley wire in the main entry and enter rooms to pick up or place cars.

To insure adequate tensile strength the conductors of Tirex Single Conductor Cable are reinforced with steel strands.



Size B. & S.	No. of Strands	Outside Diameter Inches	Wt., Lbs. per 1000 Ft.	Price per 1000 Ft.
0000	427	59/64—.922	975	.....
0000	259	59/64—.922	960	.....
000	427	55/64—.859	810	.....
000	259	55/64—.859	795	.....
00	259	26/32—.813	675	.....
00	133	26/32—.813	685	.....
0	259	49/64—.766	570	.....
0	133	49/64—.766	575	.....
1	133	23/32—.719	505	.....
2	133	21/32—.656	410	.....
3	133	20/32—.625	355	.....
3	49	20/32—.625	345	.....
4	133	18/32—.563	285	.....
4	49	18/32—.563	280	.....
5	49	33/64—.516	230	.....
6	49	31/64—.484	195	.....
8	49	27/64—.422	140	.....

Two-Conductor



Size B. & S.	No. of Strands	Outside Diameter Inches	Wt., Lbs. per 1000 Ft.	Price per 1000 Ft.
0000	427	58/32—1.813	2720	.....
0000	259	58/32—1.813	2685	.....
000	427	54/32—1.688	2285	.....
000	259	54/32—1.688	2250	.....
00	259	49/32—1.531	1840	.....
00	133	49/32—1.531	1860	.....
0	259	46/32—1.438	1570	.....
0	133	46/32—1.438	1580	.....
1	133	42/32—1.313	1300	.....
2	133	38/32—1.188	1040	.....
3	133	36/32—1.125	910	.....
3	49	36/32—1.125	915	.....
4	133	34/32—1.063	785	.....
4	49	34/32—1.063	790	.....
5	49	31/32—. 969	645	.....
6	49	29/32—. 906	550	.....
8	49	24/32—. 750	370	.....

Tirex Rubber Armored Cable

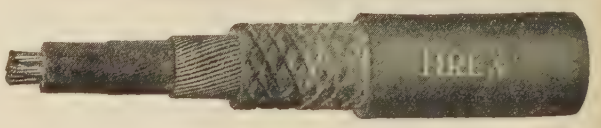
Maximum flexibility is obtained by proper stranding of the copper conductors and the omission of stiff, fibrous braids and fillings. Tirex Cables never kink.

The smooth, clean, outer surface of Tirex Cables does not collect and hold dirt and grease. It may easily be wiped clean when soiled.

Rigid electrical tests are made during the manufacture of Tirex Cables. These tests insure the integrity of every length.

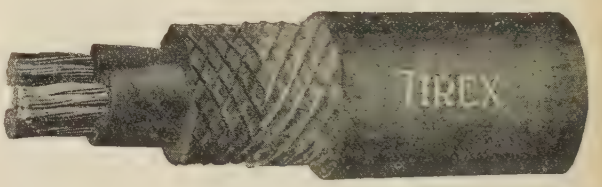
The rubber armor has remarkable wear-resisting properties and protects the cable from outside injury.

Concentric, Two-Conductor



Size B. & S.	No. of Strands	Outside Diameter Inches	Wt., Lbs. per 1000 Ft.	Price per 1000 Ft.
0000	427	42/32=1.313	1960	.....
0000	259	42/32=1.313	1945	.....
000	427	39/32=1.219	1620	.....
000	259	39/32=1.219	1605	.....
00	259	37/32=1.156	1360	.....
00	133	37/32=1.156	1370	.....
0	259	69/64=1.078	1150	.....
0	133	69/64=1.078	1155	.....
1	133	33/32=1.000	945	.....
2	133	59/64= .922	780	.....
3	133	57/64= .891	680	.....
3	49	57/64= .891	685	.....
4	133	27/32= .844	585	.....
4	49	27/32= .844	590	.....
5	49	51/64= .797	500	.....
6	49	24/32= .750	425	.....
8	49	39/64= .609	280	.....

Three-Conductor



Size B. & S.	No. of Strands	Outside Diameter Inches	Wt., Lbs. per 1000 Ft.	Price per 1000 Ft.
0000	427	63/32=1.969	3530	.....
0000	259	63/32=1.969	3560	.....
000	427	117/64=1.828	3000	.....
000	259	117/64=1.828	2970	.....
00	259	54/32=1.688	2450	.....
00	133	54/32=1.688	2460	.....
0	259	51/32=1.594	2075	.....
0	133	51/32=1.594	2095	.....
1	133	89/64=1.391	1630	.....
2	133	40/32=1.250	1290	.....
3	133	38/32=1.188	1130	.....
3	49	38/32=1.188	1135	.....
4	133	36/32=1.125	975	.....
4	49	36/32=1.125	990	.....
5	49	65/64=1.016	790	.....
6	49	61/64= .953	675	.....
8	49	25/32= .781	445	.....

Type S Tirex All Rubber Portable Cord

For Electrical Tools and Appliances

Tirex fits standing bushings. It is most satisfactory for portable lamps, tools or other appliances. Oils and acids have no appreciable effect upon it and the clean, smooth outer surface does not collect dirt or grease. The conductors are copper wire, stranded and cotton wound. Insulation is 30 per cent. The insulated conductors are twisted and covered with a high-grade rubber jacket which entirely fills the interstices between the conductors. Electrical tests are applied to each length of cord after 12 hours' submersion in water.

Two and three-conductor Nos. 14, 16 and 18 and 2-conductor No. 12 are packed in special cartons containing approximately 250 feet each (from 200 to 270 feet), so constructed that the cord may be drawn out as needed without disturbing the remainder of the coil.

Size B. & S.	Strands	*1-Conductor Thickness Insulation Inches	Wt., Lbs. per 1000 Ft.	Outside Diameter Inches	2-Conductor Wt., Lbs. per 1000 Ft.	Outside Diameter Inches
10	No. 30 A. W. G.	3/64	66	19/64 .288	242	41/64 .641
12	No. 30 A. W. G.	3/64	50	17/64 .263	188	37/64 .579
14	No. 30 A. W. G.	3/64	40	8/32 .248	153	17/32 .532
16	No. 34 A. W. G.	1/32	24	13/64 .193	90	27/64 .407
18	No. 34 A. W. G.	1/32	20	6/32 .183	79	25/64 .391
			3-Conductor		4-Conductor	
10	No. 30 A. W. G.	3/64	302	22/32 .688	368	24/32 .750
12	No. 30 A. W. G.	3/64	226	39/64 .610	279	43/64 .672
14	No. 30 A. W. G.	3/64	183	18/32 .563	220	39/64 .610
16	No. 34 A. W. G.	1/32	110	29/64 .438	132	31/64 .485
18	No. 34 A. W. G.	1/32	91	13/32 .407	107	14/32 .438

*There are no N. E. C. standards for 1-conductor rubber sheathed flexible cord.

Prices upon application.

Type SJ Tirex Portable Cord

2-conductor

Recommended for pendent drop lights, floor or table lamps, vacuum cleaners and small electrical tools and apparatus.

It is suitable for portable use in offices, dwellings and reasonably dry places where conditions are not so severe, and for pendent use in manufacturing plants and garages.

The cord is practically wearproof, never frays or kinks and is so flexible that its full length is always available without delay or annoyance.

The outer covering or rubber armor is smooth and attractive in appearance and is furnished in black or green as desired.

The colors are permanent and the wear and tear of ordinary service has no appreciable effect on them.

The insulation of each conductor is of a distinctive color for identification and polarity marking.

Tirex is packed in convenient cartons containing approximately 250 feet each, (from 200 to 270 feet) so constructed that any desired length may be removed without disturbing the remainder of the coil.

Other lengths may be obtained in coils or on reels.

Size B. & S.	Outside Diameter Inches	Wt., Lbs. per 1000 Ft.	Size B. & S.	Outside Diameter Inches	Wt., Lbs. per 1000 Ft.
16	.320	60	18	.300	50

Prices upon application.

Tirex Shot Fire Cable

Two-conductor

Suitable for rough work in damp or wet places. Not affected by acid, gas or oil.

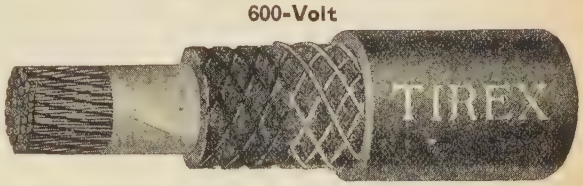
The particular features which will appeal to the shot firer, are the small diameter of about ¼ inch and the light weight of 4½ pounds to 100 feet.

Cable is flexible and has adequate tensile strength for the work for which it was designed. Does not kink or snarl.

Size A. W. G.	Approx. O. D. Inches	Approx. Wt., Lbs. per 1000 Ft.	Price per 1000 Ft.
18	.270	45	.....

Tirex Welding Cables

600-Volt



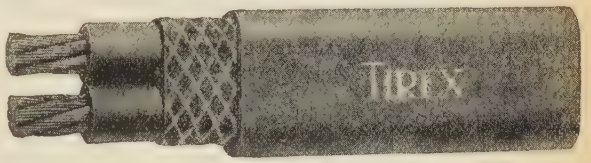
Extra flexible, with a paper separator between the insulation and the copper. Single conductor.

Size	Strands	O.D. In.	Net Wt., Lbs. 1000 Ft.	Size	Strands	O.D. In.	Net Wt., Lbs. 1000 Ft.
*4–0	5292	28/32	806	1	2107	37/64	332
*3–0	4214	26/32	661	2	1666	34/64	269
2–0	3332	45/64	512	*3	1323	16/32	224
1–0	2646	21/32	421	*4	1029	15/32	185

*Not in stock. Made on special order only.

Prices upon application.

Tirex Twin-Parallel Mining Machine Cable

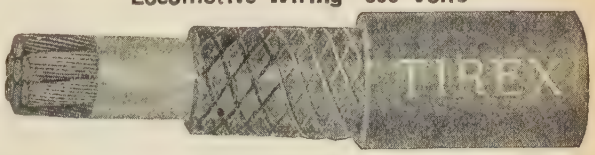


Size No.	Strands	Outside Diameter Inches	Net Weight Pounds per 1000 Feet
2	133	23/32x39/32	820
3	133	20/32x34/32	635
4	133	19/32x32/32	540
6	49	33/64x27/32	375

Prices upon application.

Tirex Motor Lead Cable

Paper Separator—Not Steel Reinforced
For Street Railway Generator Leads and Locomotive Wiring—600 Volts



Size A.W.G.	Strands	O.D. In.	Wt., Lbs. 1000 Ft.	Price, per 1000 Ft.	Size A.W.G.	Strands	O.D. In.	Wt., Lbs. 1000 Ft.	Price, per 1000 Ft.
0000	427	59/64	980		2	133	21/32	395	
000	427	55/64	810		3	133	20/32	335	
00	259	25/32	685	Upon	4	133	18/32	275	Upon
0	259	49/64	570	Appli-	5	133	33/64	230	Appli-
1	259	23/32	475	cation	6	133	31/64	195	cation
1	133	23/32	480		6	49	31/64	195	
2	259	21/32	390		8	19	27/64	140	

Whitney Blake Flexible Cords

N. E. C. Standard

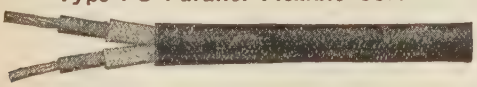
Type C Twisted Pair Lamp Cord

For pendant or portable use in dry places and where not subject to hard usage.

Each insulated conductor is covered with a glazed cotton or rayon braid and twisted together.

Size.....A.W.G.	10	12	14	16	18
Insulation.....in.	3/64	3/64	3/64	1/32	1/32
Weight per 1000 Feet...lbs.	110	81	60	37	27

Type PO Parallel Flexible Cord



Type PO-32 is for portable lamps and appliances where extra factor of safety and good appearance is desired. Type PO-64 is for portables not subject to severe usage.

Each insulated conductor is covered with a soft cotton braid laid parallel and then covered with an outer braid of glazed cotton or rayon.

Type No.....	PO-32			PO-64
Size.....A. W. G.	14	16	18	18
Insulation.....in.	3/64	1/32	1/32	1/64
Weight per 1000 Feet.....lbs.	60	37	28	20

Type PD Twisted Portable Cord

For household equipment subject to more or less flexing.

Construction is same as Type PO except that conductors are twisted together before outer braid is applied.

Size.....A. W. G.	16	18
Insulation.....in.	1/32	1/32
Weight per 1000 Feet.....lbs.	38	28

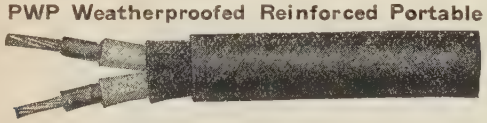
Types P-32 and P-64 Reinforced Portable Cord

For pendants or portable use in dry places and where subject to hard usage.

Each insulated conductor is covered with a soft cotton braid twisted together and covered with a rubber jacket not less than 1/64 inch thick around twisted conductors, then covered with an outer braid of glazed cotton or rayon.

Type No.....	P-32				P-64
Size.....A.W.G.	12	14	16	18	18
Insulation.....in.	3/64	3/64	1/32	1/32	1/64
Weight per 1000 Feet...lbs.	169	121	72	64	40

Type PWP Weatherproofed Reinforced Portable Cord

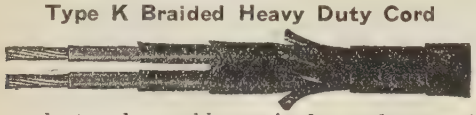


For use in damp places subject to hard usage.

Construction is same as Type P except outer braid is soft cotton weatherproofed.

Type No.....	PWP-32				PWP-64
Size.....A.W.G.	12	14	16	18	18
Insulation.....in.	3/64	3/64	1/32	1/32	1/64
Weight per 1000 Feet...lbs.	175	128	79	71	45

Type K Braided Heavy Duty Cord



For pendant and portable use in damp places and where subject to hard usage.

Each insulated conductor is covered with a soft cotton braid and twisted with jute filler to provide added protection. This is protected with a covering of two braids of weatherproofed cotton.

Size.....A.W.G.	10	12	14	16	18
Insulation.....in.	3/64	3/64	3/64	1/32	1/32
Weight per 1000 Feet...lbs.	175	130	105	71	56

Whitney Blake Flexible Cords

Types FF-32 and FF-64 Flexible Rubber Covered Fixture Cord

Type FF-32 is for wiring fixtures where temperatures do not exceed 120°F. Type FF-64 is for radios, etc.

The insulated conductor is covered with a braid of cotton, rayon, or weatherproofed cotton.

Type No.....	FF-32					FF-64
Size.....A.W.G.	10	12	14	16	18	18
Insulation.....in.	3/64	3/64	3/64	1/32	1/32	1/64
Weight per 1000 Feet.lbs.	54	40	29	17	13	9

Type CF Flexible Heat Resisting Fixture Cord

For wiring fixtures where temperatures do not exceed 194°F.

Stranded conductor of bare copper, several coverings of cotton thoroughly saturated with a flameproof and moisture-proof compound.

Can be furnished in Types C, PO and PD Lamp Cord constructions in glazed cotton or rayon.

Size.....A.W.G.	14	16	18
Weight per 1000 Feet.....lbs.	22	16	12

Type AF Flexible Heat Resisting Fixture Cord

For wiring fixtures where temperatures are over 194°F.

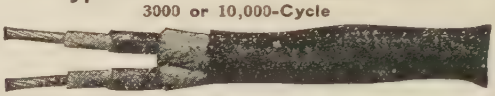
Stranded conductor of bare copper, several coverings of asbestos thoroughly saturated with a flameproof and moistureproof compound.

Can be furnished in Types C, PO and PD Lamp Cord constructions in glazed cotton or rayon.

Size.....A.W.G.	14	16	18
Weight per 1000 Feet.....lbs.	22	16	12

Type HPD Flat Iron Heater Cord

3000 or 10,000-Cycle



For flat irons and other heating appliances where subject to severe usage and flexing.

Stranded conductor of bare copper with separator. Rubber insulated 1/64 inch minimum, and asbestos covered. The two conductors are then twisted together and covered with an overall braid of glazed cotton or rayon.

Type HC is the same except that each conductor is individually braided and then twisted.

Size.....A.W.G.	10	12	14	16	18
Weight per 1000 Feet...lbs.	100	72	53	41	30

Type POSJ Rubber Sheathed Parallel Cord

For portable lamps and appliances. Is of lasting quality and capable of withstanding severe abuse.

Flexible stranded conductors with high grade insulation and an oval jacket of tough rubber over all.

Standard colors, brown or black.

Size.....A.W.G.	18
Insulation.....in.	1/64
Weight per 1000 Feet.....lbs.	28

Types S and SJ Rubber Sheathed Cord

Type S is a heavy duty cord for portable use where normally exposed to hard usage. Adapted for outdoor use, in machine shops, factories, garages, etc.

Type SJ, constant service cord, is very flexible. For portable use where not normally exposed to hard usage.

Flexible strand of No. 34 bare copper with separator. Insulation 30 per cent rubber. Twisted with fillers and covered with cotton braid and 40 per cent rubber sheath.

Both types are also furnished with 60 per cent rubber sheath to meet extremely severe conditions.

Size.....A.W.G.	10	12	14	16	18
Insulation.....in.	3/64	3/64	3/64	1/32	1/32
Minimum Wall, Type S...in.	3/32	3/32	5/64	1/16	1/16
Minimum Wall, Type SJ..in.	...	...	...	1/32	1/32
Wt. per 1000 Ft., Type S..lbs.	246	188	146	90	78
Wt. per 1000 Ft., Type SJ.lbs.	...	...	...	63	47

Whitney Blake Flexible Cords

The following appliances take the Type cord as shown:

Appliances	Types		
Air Purifiers	C	PO	POSJ
Clocks	C	PO	
Curling Irons	HPD	HC	(3000-Cycle)
Dish Washers	SJ		
Drills	S		
Fans	C	PO	PD POSJ
Flat Irons	HPD	HC	(3000 and 10,000-Cycle)
Food Mixing Machines	C	PO	SJ
Fruit Extractors	C	PO	SJ
Hair Clippers	PD	POSJ	
Heating Pads	HPD	HC	(3000-Cycle)
Ironing Machines	SJ		
Percolators	HPD	HC	(3000-Cycle)
Portable Lamps	PO		POSJ
Radios	FF	PO	POSJ
Reflector Heaters	HPD	HC	(3000-Cycle)
Refrigerators	SJ		
Riveting Hammers	S		
Saws	S		
Sewing Machines	PO	SJ	POSJ
Sun Lamps	HPD	HC	(3000-Cycle)
Toasters	HPD	HC	(3000-Cycle)
Toys	C		
Waffle Irons and Grills	HPD	HC	(3000-Cycle)
Washing Machines	SJ		
Vacuum Cleaners	SJ	PD	

Standard Colors as Adopted by Natl. Elec. Mfrs. Assn.

Black, blue, maroon, red, gray, white, yellow, oak tan, brush brass, olive, green, and dark brown. Glazed cotton also furnished in medium and light brown, and orange.

Rayon colors are also old gold, tiffany, and rose.

Ordering Instructions

When ordering, specify size in A.W.G.; No. of conductors; style, either by type or letter; finish, whether dry or weatherproof, cotton or rayon; and color.

Whitney Blake Type GT Gas Tube Neonlite and Type GTO Oil Burner Cables

Made in three different types, each in two finishes.

Weatherproof finish, black fire resisting wax and mica.

Lacquered finish, flexible black fire resisting lacquer over black glazed cotton braid.

Style No., Weatherproof	1074	1084	1094
Style No., Lacquered	1074-L	1084-L	1094-L
Type No., Neonlite Cable	GT-5	GT-10	GT-15
Type No., Oil Burner Cable	GTO-5	GTO-10	GTO-15
Working Voltage	5000	10000	15000
Extended Voltage	10000	20000	30000
	¾" Mandrel	1" Mandrel	1¼" Mandrel
Puncture Voltage	17000	33000	50000
Diam. Over All, Weatherproof....in.	9/32	3/8	15/32
Diam. Over All, Lacquered.....in.	9/32	3/8	13/32
Wt. per 1000 Ft., Weatherproof...lbs.	45	70	100
Wt. per 1000 Ft., Lacquered.....lbs.	42	65	80

Whitney Blake Automotive Wires and Cables

Battery and Starting Cable

Battery and starting cable is of commercial grade, of soft natural color, black weatherproof finish.

Type No.	Size A.W.G.	No. Conductors	Copper Stranding	Insulation Diam In. Over All	Insulation Wall In.	No. Braids	Wt. Lbs. 1000 Ft.
41-S	4	1	49—21 T	13/32	3/64	1	180
21-S	2	1	133—23 T	31/64	3/64	1	290
11-S	1	1	133—22 T	17/32	3/64	1	350
1-B	1	1	133—22 T	19/32	3/64	2	360
01-S	0	1	133—21 T	37/64	3/64	1	430

Furnished in 250-foot coils.

Whitney Blake Automotive Wires and Cables

Braided Ignition Cables

A Corona-Proof compound is used on all ignition cables. The lacquered cables are covered with a closely woven braid of cotton and treated with a flexible lacquer built to withstand oil, gasoline, and extremes of heat and cold.

For the severe conditions encountered on bus and truck work Type No. 715 is specially recommended. It has an insulation of rubber and layers of varnished cambric tape wound in reverse direction, natural cotton braid weatherproofed and over all a high quality glazed cotton braid treated with the same flexible lacquer as the S.A.E. grade.

"Com" indicates commercial grade.

High Tension Ignition Cable

Type No.	Size A.W.G.	Grade	Copper Stranding	Insulation Diam. In. Over All	Insulation Wall In.	No. of Brds.	Std. Color	Wt. 1000 Ft.
611	16	Com	19—29 T	7 M/M	.....	1	Brown	43
767	16	SAE	19—29 T	7 M/M	.....	1	Gold	37
764	16	SAE	19—29 T	7 M/M	.....	1	Black	37
964	16	SAE	19—29 T	9 M/M	.....	1	Black	57
713	14	Com	19—27 T	7 M/M	.....	1	Brown	44
777	14	SAE	19—27 T	7 M/M	.....	1	Gold	40
744	14	SAE	19—27 T	7 M/M	.....	1	Black	41
715	14	WB	19—27 T	7 M/M	.....	2	Gold	44
914	14	SAE	19—27 T	9 M/M	.....	1	Black	61

Low Tension Ignition Cable

162BB	16	SAE	19—29 T	3/16	.031—1/32	2	Brown	19
142BB	14	SAE	19—27 T	13/64	.031—1/32	2	Brown	25

Braided Lighting Cables

Single Conductor Cable

All braids in this group are treated with a high grade flexible lacquer. Standard color is brown.

Type No.	Size A.W.G.	No. Conductors	Copper Stranding	Insulation Diam. In. Over All	Insulation Wall In.	No. of Brds.	Wt. 1000 Ft.
181	18	1	16—30 T	1/8	.015—1/64	1	10
182	18	1	16—30 T	9/64	.031—1/32	1	13
161	16	1	19—29 T	9/64	.022	1	13
162	16	1	19—29 T	5/32	.031—1/32	1	16
162-D	16	2	19—29 T	11/32x3/16	.031—1/32	2	36
141	14	1	19—27 T	5/32	.027	1	20
142	14	1	19—27 T	11/64	.031—1/32	1	22
142-D	14	2	19—27 T	3/8x13/64	.031—1/32	2	48
122	12	1	19—25 T	13/64	.031—1/32	1	30
102	10	1	19—23 T	7/32	.031—1/32	1	45

Armored Lighting Cables

Single Conductor Cable

Parallel 2-Conductor Cable

Between the copper conductors and the oval steel armor is applied two coverings of varnished cambric tape and one cotton braid, waxed.

189	18	1	16—30 B	9/64	.....	23
189-D	18	2	16—30 B	15/64x9/64	.....	40
169	16	1	19—29 B	5/32	.....	27
169-D	16	2	19—29 B	17/64x5/32	.....	48
149	14	1	19—27 B	11/64	.....	34
149-D	14	2	19—27 B	19/64x11/64	.....	61
129	12	1	19—25 B	3/16	.....	44
109	10	1	19—23 B	7/32	.....	63

Both braided and armored lighting cables are made to S.A.E. specifications and are also used on the horns and on other low voltage equipment on the car.

Regularly furnished in 500-foot coils. Furnished on 100-foot spools at slight additional cost.

Whitney Blake Telephone Wires

No. 17 Drop Wire

Copperweld, Twisted Pair, Spec. 3791
Bronze, Twisted Pair, Spec. 3730

Copperweld, Parallel, Spec. 5791
Bronze, Parallel, Spec. 5730

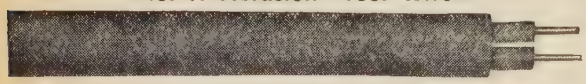
Copperweld, tensile strength, 220 lbs.; conductivity, 30%
Bronze, tensile strength, 170 lbs.; conductivity, 38%.
Diameter over rubber, .110 inch (7/64).
Weight per 1000 feet, twisted pair, 33 lbs.; parallel, 31 lbs.

Bridle or Outside Wires

No. 18, Twisted Pair, Spec. 4823

Size A.W.G.	14	16	18	19	20
Diameter Over Rubber in.	5/32	1/8	7/64	3/32	.085
Weight per 1000 Feet lbs.	60	42	31	22	20

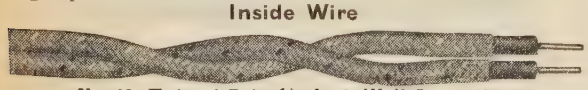
No. 17 Abrasion Proof Wire



Spec. 4746

Diameter Over Rubber in.	.115
Weight per 1000 Feet lbs.	55

Inside Wire



No. 19, Twisted Pair, 1/32-Inch Wall Spec. 4926
No. 22, Twisted Pair, 1/64-Inch Wall Spec. 4256

Size A.W.G.	19	22
Diameter Over Rubber in.	3/32	.055
Weight per 1000 Feet lbs.	21	10

Switchboard Wire

No. 20, Twisted Pair, Spec. 5758

Size A.W.G.	19	20
Diameter Over Rubber in.	3/32	.085
Weight per 1000 Feet lbs.	23	18

Flameproof Distributing Wire

No. 20, Twisted Pair, Spec. 2056

Size A.W.G.	19	20	22
Diameter Over Rubber in.	3/32	.085	5/64
Weight per 1000 Feet lbs.	23	17	13

Single Ground Wire

No. 14, Spec. 2990

Size A.W.G.	14	18
Diameter Over Rubber in.	5/32	7/64
Weight per 1000 Feet lbs.	27	13

No. 22 Duct Wire

Twisted Pair, Spec. 5423

Diameter Over Rubber in.	1/64
Weight per 1000 Feet lbs.	14

Pothead Wire

No. 19, Twisted Pair, Spec. 3643

Size A.W.G.	16	19	20	22
Diameter Over Rubber in.	1/32	3/32	3/32	3/32
Weight per 1000 Feet lbs.	37	20	19	17

Weights are 2-conductor, except ground wire.
Coil lengths, 200 to 1500 feet.
The 4-figured numbers shown are the Graybar-Whitney Blake specification numbers.

Whitney Blake Enameled Flameproof Distributing Frame and Rack Wires

Tussah Silk Winds with braided flameproof covering or cotton wound cellulose acetate flameproof coating.

Size A.W.G.	20	22
Weight per 1000 Feet lbs.	9	7

Whitney Blake Telegraph Wires

Flameproof Distributing Wire

Size A.W.G.	18	16
Diameter Over Rubber in.	7/64	1/32
Weight per 1000 Feet lbs.	27	38

Inside Wire

Size A.W.G.	18	16	14
Diameter Over Rubber in.	7/64	1/32	5/32
Weight per 1000 Feet lbs.	26	35	54

Outside or Bridle Wire

Size A.W.G.	12	10
Diameter Over Rubber in.	3/64	3/64
Weight per 1000 Feet lbs.	80	109

For details of construction see illustrations of similar types of telephone wires.
Weights are 2-conductor.
Coil lengths, 200 to 1500 feet.
Wires can also be manufactured to conform to customer's specifications.

Annunciator Wire

Regular

Furnished in colors and styles as follows: either plain copper or tinned; plain copper furnished unless otherwise ordered; red, blue, red and white, brown, brown and white, white, olive, yellow and white, blue and white, green, green and white and special colors where possible for us to obtain proper colored yarns.

	Single Conductor					Twisted Pairs	
	Wt., Lbs.	Net Additions to Base				Wt., Lbs.	
Size A.W.G.	per 1000 Ft.	6-7-lb. Spools	1-lb. Spools	½-lb. Coils	1-lb. Coils	per 1000 Ft.	6-7-lb. Spools
14	15	$.05	$.08	$.07	$.06	30	$.06
16	9.5	.07	.10	.09	.08	19	.08
18	6.5	.10	.13	.12	.11	13	.11
20	4.5	.17	.20	.19	.18	9	.18
22	3.2	.21	.24	.23	.22	7	.22

Tinned wire furnished on application at $.02½ per pound extra.

Damp-Proof Office Wire

This wire is double braided, the inner braid saturated with black weatherproof compound. The outer braid is specially treated with wax, highly polished and will not collect dust. Damp-proof office wire is carried regularly in the following colors: red, red and white, blue, blue and white.

Sizes 16 and 18 wire, in red, red and white, blue, blue and white, are also carried in duplex wire, being two separately insulated conductors under one braid.

	Single Conductor			Duplex Double Conductor	
	Wt., Lbs.	Net Additions to Base		Wt., Lbs.	Net Additions
Size A.W.G.	per 1000 Ft.	10-lb. Coils	5-lb. Spools	per 1000 Ft.	to Base 10-lb. Coils
14	20	$.10	$.15	35	$.11
16	14.5	.12	.17	27	.13
18	10	.14	.18	18	.15

Tinned wire furnished on application.

Annunciator Cables

This cable is designed for connecting the annunciator in an elevator car with the push buttons on the different floors.

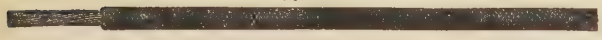
Each conductor is composed of 16 strands of No. 30 A.W.G. gauge soft untinned copper wire and insulated with two reverse wrappings of cotton and one cotton braid. The insulated conductors are then cabled (using a steel supporting strand if desired, in order to give extra tensile strength, but ordinarily supplied without same) then covered with two cotton braids, the inner one being white and the outer one black. This is a dry cable, and the outer braids are not flameproof.

Prices on application.

Deltabeston Fixture Wire—Plain

Single Conductor—Stranded

Type AF



The flexible conductor is insulated with a 1/32-inch wall of asbestos fiber, purified by a special process. Felted asbestos fixture wire is recommended for all classes of fixture wiring, etc., and is especially adapted for fixtures in which the temperature liable to be attained by some parts are such as to render the use of rubber covered wires or cords either undesirable or impracticable. It can be "fished" through fixtures with the utmost ease. Standard length, 250 feet. Furnished on spools.

Size B. & S.	Diam. Over All In.	Stranding B. & S.	Wt., Lbs. per 1000 Ft.
10	200	65/28	42
12	177	66/30	29
14	141	41/30	20
16	123	26/30	14
18	111	16/30	10

Colored Finish, Plain

Single conductor fixture wire, plain, similar to that described above, can be finished with gray, cream, old brass or bronze colored filling compound at an increase in price.

Single Conductor—Solid

Either the black finish or colored finish fixture wire described above can be furnished with solid conductor where extreme flexibility is not necessary.

Deltabeston Fixture Wire

Cotton and Art Silk

This is the plain, black finish fixture wire with a braided outer covering of art silk or cotton. It is especially adapted for fixtures on which the wiring is exposed to view. It has a small diameter and is neat and attractive in appearance. This wire is furnished in single and two conductors.

Standard length of spools, 250 feet.

Type AF—Single Conductor

Plain with Braid

Size A.W.G.	Diameter Over All Inches	Wt. Lbs. per 1000 Feet	Size A.W.G.	Diameter Over All Inches	Wt. Lbs. per 1000 Feet
12	.207	28	16	.153	14
14	.171	20	18	.141	10

Type AFPD—Duplex

Two Plain Conductors Twisted Together and Braided

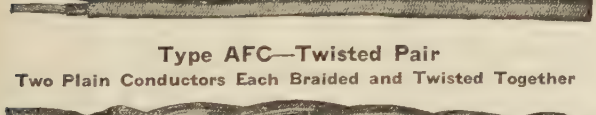
12	.384	60	16	.276	32
14	.312	42	18	.252	24

Type AFPO—Parallel

Two Plain Conductors Laid Flat and Braided Together

Type AFC—Twisted Pair

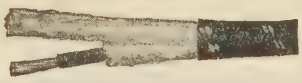
Two Plain Conductors Each Braided and Twisted Together



12	.414	60	16	.306	33
14	.342	43	18	.282	25

GraybaR QUALITY
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

Deltabeston HPD Heater Cords



No. 60

Deltabeston HPD Heater Cord should not be confused with ordinary rubber and asbestos insulated heater cords. It is a product of fine materials, close precision, workmanship and careful inspection, both as to raw materials and the finished product.

The outer braid, which is of fine quality glazed cotton yarn, is woven over the two conductors in a manner similar to that of woven fire hose. The asbestos is applied in a uniform adhesive mass which forms a solid tube of asbestos fibres completely around the rubber insulated conductor.

Meets with a wide margin of safety, all requirements of the National Electric Code and an Underwriters' label is applied every 5 feet throughout the entire length.

Made in 4 standard styles of braiding Pattern Nos. 30, 40, 50 and 60.

Shipped in 250-ft. coils or in long lengths on 24-in. wooden reels.

Order by pattern number for all sizes and classes.

Special patterns supplied on orders for 5000 ft. or more.

3000-Cycle

Size B & S Gauge	14	16	18
Stranding	104/34	66/34	41/34
Carrying Capacity..Amperes	20	10	5
Weight per 1000 Feet.pounds	57	42	31

10000-Cycle

Size B & S Gauge	16	18	.....
Stranding	103/36	65/36	.....
Carrying Capacity..Amperes	10	5	.....
Weight per 1000 Feet.pounds	42	32	.....

Deltabeston Heater Cord

2-Conductor, Stranded

Style A, Asbestos Braid Overall

For service where rubber is not necessary, felted asbestos heater cord is satisfactory. Each conductor is composed of 30 B.&S. gauge copper wires stranded together and insulated with a 1/32 inch wall of pure asbestos fiber. This is filled with a compound which gives it high dielectric strength and provides a tough, pliable insulation.

Style A is a fire-proof cord. The twisted conductors are covered with an asbestos braid.

The felted asbestos insulation does not deteriorate with age. The insulation so cements the wires that, even should some of them break, the fine strands will not penetrate the outer covering and cause short circuits.

Size B.&S.	Diameter Over All Inches	Stranding B.&S.	Wt. Lbs. per 1000 Ft.	Size B.&S.	Diameter Over All Inches	Stranding B.&S.	Wt., Lbs. per 1000 Ft.
12	.399	66/30	87	16	.323	26/30	52
14	.359	41/30	67	18	.299	16/30	41

2-Conductor, Braided

The braided conductor is made by braiding 34 B.&S. gauge copper wires instead of stranding 30 B.&S. wires.

Style C, Glazed Cotton Braid Overall

Size B.&S.	Diameter Over All Inches	Stranding B.&S.	Wt. Lbs. per 1000 Ft.	Size B.&S.	Diameter Over All Inches	Stranding B.&S.	Wt., Lbs. per 1000 Ft.
14	.294	107/34	44	17	.264	52/34	27
16	.258	66/34	32	18	.234	41/34	23

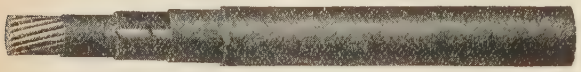
Style D, Glazed Cotton Braid on Each Conductor

14	.324	107/34	45	17	.276	52/34	28
16	.288	66/34	33	18	.264	41/34	24

Deltabeston Coarse Strand Station Cable

For 750-Volt Service

Insulated with Pure Long-Fibre Asbestos, Varnished Cloth Insert—Finished with Black Asbestos Braid or Lead—Flame and Moisture-Proof



For wiring in open or in conduit where unusually severe conditions exist.

Insulation will not deteriorate under constant exposure to temperature of 250° F. Resists oil, acids and corrosive vapors.

Size C.M.	Stranding	Allowable Carry. Cap. Amps.	Diam. Bare Wire In.	*Max. O.D. In.	Factory Voltage Test 5 Min. Kv.	Std. Lgth. Ft.	Wt.Lbs per 1000 Ft. (Braided)
1000000	61x.128	1000	1.152	1.542	10.5	500	3550
950000	61x.1248	950	1.123	1.513	10.5	500	3381
900000	61x.1215	900	1.093	1.483	10.5	500	3219
850000	61x.118	880	1.062	1.452	10.5	500	3048
800000	61x.1145	840	1.031	1.421	10.5	500	2888
750000	61x.1109	800	.998	1.388	10.5	500	2726
700000	61x.1071	760	.964	1.354	10.5	500	2558
650000	61x.1032	720	.929	1.318	10.5	500	2392
600000	61x.0992	680	.893	1.283	10.5	500	2226
550000	61x.095	650	.855	1.245	9.0	500	2060
500000	37x.1162	600	.814	1.204	9.0	500	1803
450000	37x.1103	550	.772	1.072	9.0	500	1642
400000	37x.1039	500	.728	1.028	9.0	500	1482
350000	37x.0973	450	.681	.981	9.0	500	1307
300000	37x.090	400	.630	.930	7.0	500	1140
250000	37x.0822	350	.575	.875	7.0	500	970
A.W.G.							
0000	19x.1055	325	.528	.788	7.0	1000	805
000	19x.094	275	.470	.730	7.0	1000	656
00	19x.0837	225	.418	.678	7.0	1000	536
0	19x.0745	200	.373	.633	4.5	1000	440
1	19x.0664	150	.332	.562	4.5	1000	365
2	7x.0974	125	.292	.522	4.5	1000	281
3	7x.0867	100	.260	.490	4.5	1000	232
4	7x.0772	90	.232	.462	4.5	1000	193
5	7x.0688	80	.206	.436	4.5	1000	161
6	7x.0612	70	.184	.414	4.5	1000	136
8	7x.0486	50	.146	.366	3.0	1000	96
10	7x.0385	30	.116	.316	3.0	1000	76
12	7x.0305	25	.092	.292	3.0	1000	50
14	7x.0242	20	.073	.273	3.0	1000	39

*A tolerance of 5% over or under the o.d. shown above is necessary due to process of manufacture.

Deltabeston Flexible Strand Apparatus Cable

For 750-Volt Service

Insulated with Pure Long-Fibre, Felted Asbestos, Varnished Cloth Insert—Finished with Black Asbestos Braid—Flame and Moisture-Proof

Recommended for wiring all low-voltage apparatus in power plants, steel mills and any other installations where severe conditions exist.

Insulation will not deteriorate under constant temperature of 250° F. Resists oil, acids and corrosive vapors.

Can be bent to a radius equal to 6 times its own diameter without reducing thickness of insulating wall.

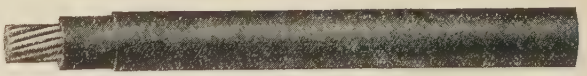
Size C.M.	Stranding	Allowable Carry. Cap. Amps.	Diam. Bare Wire In.	*Max. O.D. In.	Factory Voltage Test 5 Min. Kv.	Std. Lgth. Ft.	Wt.Lbs. per 1000 Ft.
500000	61x7 (.0339)	600	.914	1.264	9.0	500	1829
450000	61x7 (.0319)	550	.863	1.163	9.0	500	1658
400000	61x7 (.0301)	500	.814	1.114	9.0	500	1495
350000	61x7 (.0284)	450	.768	1.068	9.0	500	1340
300000	61x7 (.0269)	400	.725	1.025	9.0	500	1219
250000	37x7 (.0320)	350	.671	.971	7.0	500	1060
A.W.G.							
0000	37x7 (.0284)	325	.598	.858	7.0	500	812
000	37x7 (.0253)	275	.532	.792	7.0	500	669
00	37x7 (.0226)	225	.474	.734	7.0	500	547
0	37x7 (.0201)	200	.422	.682	7.0	500	448
1	19x7 (.0253)	150	.380	.610	4.5	500	370
2	19x7 (.0226)	125	.339	.569	4.5	500	287
3	19x7 (.0201)	100	.302	.532	4.5	500	238
4	19x7 (.0179)	90	.269	.499	4.5	500	195
5	7x7 (.0253)	80	.228	.458	4.5	500	155
6	7x7 (.0226)	70	.203	.433	4.5	500	127
8	7x7 (.0179)	50	.161	.381	4.5	500	92
10	37x.01689	30	.118	.318	4.5	500	65
12	37x.01339	25	.094	.294	2.5	500	41
14	37x.0106	20	.074	.274	2.5	500	36

*A tolerance of 5% over or under the o.d. shown above is necessary due to process of manufacture.

Deltabeston Coarse Strand Cable

For 600-Volt Service

Insulated with a Heavy Wall of Pure Long-Fibre, Felted Asbestos—Finished with Asbestos Braid or Lead—Flame and Moisture-Proof



For open wiring in boiler rooms of central stations and industrial plants, kiln rooms; also for wiring resistance grids, rheostats and any other installations where fire hazards prevail.

Insulation will not deteriorate in constant temperature of 400° F. Resists oil, heat, moisture and corrosive vapors.

Size C.M.	Stranding	Allowable Carry. Cap. Amps.	Diam. Bare Wire In.	*O.D. In.	Std. Lgth. Ft.	Wt. Lbs. per 1000 Ft. (Braided)
1000000	61x.128	1000	1.152	1.592	500	3615
950000	61x.1248	950	1.123	1.563	500	3450
900000	61x.1215	900	1.093	1.533	500	3290
850000	61x.118	880	1.062	1.502	500	3115
800000	61x.1145	840	1.031	1.471	500	2955
750000	61x.1109	800	.998	1.398	500	2750
700000	61x.1071	760	.964	1.364	500	2580
650000	61x.1032	720	.929	1.329	500	2410
600000	61x.0992	680	.893	1.293	500	2245
550000	61x.095	650	.855	1.255	500	2080
500000	37x.1162	600	.814	1.154	500	1833
450000	37x.1103	550	.772	1.102	500	1660
400000	37x.1039	500	.728	1.058	500	1505
350000	37x.0973	450	.681	1.011	500	1330
300000	37x.090	400	.630	.960	500	1160
250000	37x.0822	350	.575	.905	500	995
A.W.G.						
0000	19x.1055	325	.528	.798	1000	823
000	19x.094	275	.470	.740	1000	672
00	19x.0837	225	.418	.688	1000	550
0	19x.0745	200	.373	.643	1000	458
1	19x.0664	150	.332	.602	1000	379
2	7x.0974	125	.292	.562	1000	316
3	7x.0867	100	.260	.470	1000	240
4	7x.0772	90	.232	.442	1000	200
5	7x.0688	80	.206	.416	1000	169
6	7x.0612	70	.184	.394	1000	143
8	7x.0486	50	.146	.306	1000	91
10	7x.0385	30	.116	.266	1000	64
12	7x.0305	25	.092	.232	1000	46
14	7x.0242	20	.073	.213	1000	34

*A tolerance of 5% over or under the o.d. shown above is necessary due to process of manufacture.

Deltabeston Flexible Strand Cable

For 600-Volt Service

Insulated with a Heavy Wall of Pure Long-Fibre, Felted Asbestos, Thoroughly Impregnated —Finished with Black Asbestos Braid

Flame and Moisture-Proof

For wiring all electrical apparatus where the most extreme conditions exist, especially where conductor heat is present.

Insulation will not deteriorate in a constant temperature of 400° F. Resists oil, flame and corrosive vapors.

Can be bent to a radius equal to 6 times its own diameter without reducing insulation thickness.

Size C.M.	Stranding	Allowable Carry. Cap. Amps.	Diam. Bare Wire In.	*O.D. In.	Std. Lgth. Ft.	Wt. Lbs. per 1000 Ft.
500000	61x7 (.0339)	600	.914	1.264	500	1850
450000	61x7 (.0319)	550	.863	1.193	500	1655
400000	61x7 (.0301)	500	.814	1.144	500	1500
350000	61x7 (.0284)	450	.768	1.098	500	1350
300000	61x7 (.0269)	400	.725	1.055	500	1215
250000	37x7 (.0320)	350	.671	1.001	500	1060
A.W.G						
0000	37x7 (.0284)	325	.598	.868	1000	830
000	37x7 (.0253)	275	.532	.802	1000	675
00	37x7 (.0226)	225	.474	.744	1000	550
0	37x7 (.0201)	200	.422	.692	1000	460
1	19x7 (.0253)	150	.380	.650	1000	380
2	19x7 (.0226)	125	.339	.609	1000	310
3	19x7 (.0201)	100	.302	.512	1000	240
4	19x7 (.0179)	90	.269	.479	1000	200
5	7x7 (.0253)	80	.228	.438	1000	160
6	7x7 (.0226)	70	.203	.413	1000	130
8	7x7 (.0179)	50	.161	.321	1000	85
10	37x.01689	30	.118	.268	1000	60
12	37x.01339	25	.094	.234	1000	41
14	37x.0106	20	.074	.214	1000	32

*A tolerance of 5% over or under the o.d. shown above is necessary due to process of manufacture.

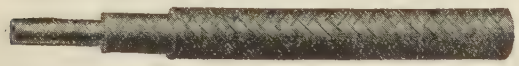
Deltabeston Switchboard and Rheostat Wire

Black Asbestos Braid, Solid Conductor

For wiring rheostats, control panels, switchboards and all other installations where heat is a factor. The insulation will not dry out with age, is unaffected by moisture, steam or severe heat (400° F.), is flexible at all times and remains concentric when the wire is bent.

For 600-Volt Service

Insulated with a Heavy Wall of Pure Long-Fibre, Felted Asbestos—Finished with a Heavy Asbestos Braid



Insulation consists of a heavy wall of compressed felted asbestos applied directly to the conductor in a smooth mass of uniform thickness. It is then thoroughly dried and completely saturated with a compound by means of a process which completely excludes moisture, toughens the insulation and moulds it into a compact body.

Over this is closely braided an asbestos covering, which is impregnated with a flame and weatherproof compound, cementing braid to inner layer of insulation and resulting in a close, tight wall of moulded asbestos.

Finish, black or white.

Size A.W.G.	Carrying Cap. Amps.	Wall Thickness Insulation, In. Felted Asbestos	Asbestos Braid	O.D. In.	Factory Voltage Test 5 Min. Kv.	Std. Lgth.	Wt. Lbs. per 1000 Ft.
0000	325	.060	.045	.670	3000	250′ Reel	735
000	275	.060	.045	.620	3000	250′ Reel	590
00	225	.060	.045	.575	3000	250′ Reel	485
0	200	.060	.045	.535	3000	250′ Reel	340
1	150	.040	.045	.459	2500	250′ Reel	300
2	125	.040	.045	.428	2500	250′ Reel	245
3	100	.040	.045	.399	2500	250′ Coil	200
4	90	.040	.045	.374	2500	250′ Coil	165
6	70	.035	.045	.322	2500	250′ Coil	113
8	50	.035	.040	.278	2000	250′ Coil	75
10	30	.035	.040	.252	2000	500′ Coil	52
12	25	.032	.040	.225	2000	500′ Coil	38
14	20	.032	.040	.208	2000	500′ Coil	29
16	10	.032	.040	.195	2000	500′ Coil	22
18	5	.032	.040	.184	2000	500′ Coil	18

For 750-Volt Service

Insulated with Varnished Cloth, Felted Asbestos, Asbestos Braid

Insulation consists of a wall of black varnished cloth, free from all imperfections and applied in the form of helically-wound tapes with the joints in successive layers being staggered. A non-hardening plastic compound is applied between the layers of varnished cloth.

Over this a wall of felted asbestos thoroughly impregnated with a flame and moisture-proof compound is applied by a special process which actually seals the varnished cambric beneath it.

Outer finish is a heavy asbestos braid, also flame and moisture-proof, which protects the insulation from abrasion. After impregnation the braid becomes a part of the insulation, all spaces being completely filled.

Standard color, black; other colors supplied if desired.

Size A.W.G.	Carrying Cap. Amps.	Wall Thickness Insulation, In. Varnished Cambric	Felted Asbestos	Asbestos Braid	O.D. In.	Factory Voltage Test 5 Min. Kv.	Std. Lgth.	Wt. Lbs. per 1000 Ft.
0000	325	.040	.030	.045	.690	7500	250′ Reel	750
000	275	.040	.030	.045	.640	7500	250′ Reel	605
00	225	.040	.030	.045	.595	7500	250′ Reel	490
0	200	.040	.030	.045	.555	7500	250′ Reel	395
1	150	.040	.030	.045	.519	7500	250′ Reel	320
2	125	.040	.030	.045	.488	5000	250′ Reel	260
3	100	.040	.030	.045	.469	5000	250′ Reel	215
4	90	.040	.030	.045	.434	5000	250′ Reel	175
6	70	.040	.030	.045	.392	5000	250′ Coil	120
8	50	.030	.020	.040	.308	5000	250′ Coil	80
10	30	.030	.020	.040	.282	3500	250′ Coil	60
12	25	.030	.020	.040	.261	3500	500′ Coil	45
14	20	.030	.020	.040	.244	3000	500′ Coil	32
16	10	.025	.020	.040	.221	3000	500′ Coil	25
18	5	.025	.020	.040	.210	3000	500′ Coil	20

Deltabeston Switchboard Wire

For 750-Volt Service

Insulated with Varnished Cloth, Felted Asbestos, Flame-Proof Cotton Yarn Braid—Solid Conductor, Tinned

For wiring switchboards and all other types of control apparatus.

Insulation consists of a wall of black varnished cambric applied in the form of helically-wound tapes with joints in successive layers being staggered. A non-hardening plastic compound is applied between the layers of varnished cambric and excludes moisture and air. Over this a wall of felted asbestos, thoroughly impregnated with a flame and moisture-proof compound, is applied by a special process which seals the varnished cambric beneath it. Outer finish is a closely woven cotton yarn braid saturated with a flame and moisture-proof compound.

Standard color, gray; other colors can be supplied.

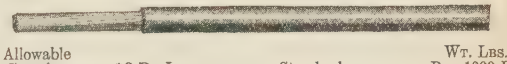
Size A.W.G.	Carrying Cap. Amps.	Wall Thickness Insulation, In. Varnished Cambric	Felted Asbestos	Cotton Braid	O.D. In.	Factory Voltage Test 5 Min. Kv.	Std. Lgth.	Wt. Lbs. per 1000 Ft.
0000	325	.040	.030	.025	.650	7000	250′ Reel	825
000	275	.040	.030	.025	.600	7000	250′ Reel	680
00	225	.040	.030	.025	.555	6000	250′ Reel	560
0	200	.040	.030	.025	.515	6000	250′ Reel	470
1	150	.040	.030	.025	.479	6000	250′ Reel	400
2	125	.040	.030	.025	.448	4500	250′ Reel	310
4	90	.040	.030	.025	.394	4500	500′ Reel	225
6	70	.040	.030	.025	.352	4500	500′ Reel	156
8	50	.030	.020	.021	.271	2500	500′ Reel	85
10	30	.030	.020	.021	.245	2500	500′ Coil	62
12	25	.030	.020	.021	.224	2500	500′ Coil	45
14	20	.030	.020	.021	.207	2500	500′ Coil	34

Deltabeston Stove Wire

Felted Asbestos Insulation—Asbestos Braid Over All

Size A.W.G.	Allowable Carrying Capacity Amperes	Felted Asbestos Insulation Inches	*O.D. Inches	Standard Length	Wt. Lbs. per 1000 Feet
0000	325	.060	.670	250′ Reel	735
000	275	.060	.620	250′ Reel	590
00	225	.060	.570	250′ Reel	485
0	200	.060	.535	250′ Reel	390
1	150	.040	.449	250′ Reel	300
2	125	.040	.418	250′ Reel	245
3	100	.040	.389	250′ Coil	200
4	90	.040	.360	250′ Coil	165
6	70	.035	.322	250′ Coil	113
8	50	.035	.288	250′ Coil	75
10	30	.035	.262	500′ Coil	52
12	25	.032	.231	500′ Coil	38
14	20	.032	.214	500′ Coil	29
16	10	.032	.200	500′ Coil	22
18	5	.032	.190	500′ Coil	18

Felted Asbestos Insulation—Plain



Size A.W.G.	Allowable Carrying Capacity Amperes	*O.D., Inches .032″ Wall	.040″ Wall	Standard Coil in Feet	Wt. Lbs. Per 1000 Ft. .032″ Wall	.040″ Wall
6	70	.225	.242	250	106	120
8	50	.192	.208	250	65	72
10	30	.166	.182	500	38	41
12	25	.144	.160	500	25	27
14	20	.128	.144	1000	17.5	19
16	10	.115	.131	1000	12	14
18	5	.105	.121	1000	9	10.5

*A tolerance of 3% over or under the o.d. shown above is necessary due to process of manufacture.

Deltabeston Round, Square and Rectangular Magnet Wire

Round

Rectangular

This wire is insulated with pure long fibre asbestos applied by a unique process which dispenses the fibres in a completely aired atmosphere while being spun around the copper. The result is a firmly compressed insulating wall of intertangled asbestos fibres, which, after being thoroughly impregnated with various varnishes and waxes, is much greater than the thickness of double cotton magnet wire insulation.

It is rated as Grade B insulation and its heat resisting qualities make it practically indestructible by any temperature it may be subjected to in commercial service.

Standard Finishes

Standard brown finish has a smooth waxy surface which will not harden with age. It resists abrasion exceptionally well and the copper can be formed into intricate coils with the utmost ease.

Standard white finish has a covering of pure white asbestos and is a soluble insulation. This finish is recommended for those who desire to impregnate their own coils.

White enamel (WE finish) consists of standard white finish with a baked enamel finish over the outside, the result being an asbestos insulation with a coating of high grade enamel over all.

Enameled asbestos (EA finish) is enameled magnet wire insulated with a very thin coating of asbestos. This wire can be furnished in any of the above finishes.

Round

Size A.W.G.	Diameter, Inches: Bare Wire	Diameter, Inches: Over Insulation (Approx.)	Approx. Lgth., Ft. per Lb.	Ship. Wt., Lbs. per Reel
3/0	.4100	.429	1.950	200
2/0	.3650	.384	2.446	200
0	.3249	.339	3.075	200
1	.2893	.303	3.871	200
2	.2576	.271	4.864	200
3	.2294	.242	6.124	200
4	.2043	.216	7.716	200
5	.1891	.194	9.690	200
6	.1620	.174	12.18	200
7	.1443	.156	15.31	150
8	.1285	.140	19.32	150
9	.1144	.126	24.25	150
10	.1019	.112	30.37	150
11	.0907	.101	38.33	150
12	.0808	.091	48.05	150
13	.0720	.082	60.83	150
14	.0641	.074	76.28	150
15	.0571	.067	95.51	150
16	.0508	.059	119.3	50
17	.0453	.053	149.6	50
18	.0403	.048	186.7	50
19	.0359	.044	231.9	50
20	.0320	.040	288.6	50

Round Magnet Wire

Size A.W.G.	Full Spool Pounds	150 to 199 Lbs.	50 to 149 Lbs.	20 to 49 Lbs.	5 to 19 Lbs.	4 Lbs. and Less
3/0 to 6	200	2	4	8	20	40
7 to 15	150	...	4	6	16	40
16 to 20	50	...	...	4	12	40
21 to 25	20	...	...	...	8	40

Rectangular Magnet Wire

Size Mils. Thick	Full Spool Pounds	100 to 199 Lbs.	50 to 99 Lbs.	25 to 49 Lbs.	24 Lbs. and Less
60 to 300	200	3	6	12	25
20 to 50	100	...	3	6	25

Prices Upon Application

Round Magnet Wire

Size B. & S. No.	Single Cotton Covered: Diam. Bare Wire In.	Thickness of Ins. In.	Diam. Over All In.	Ft. per Lb.	Double Cotton Covered: Thickness of Ins. In.	Diam. Over All In.	Ft. per Lb.
1	.2893	.009	.2983	3.91	.018	.3073	3.88
2	.2576	.009	.2666	4.94	.018	.2756	4.9
3	.2294	.009	.2384	6.23	.018	.2474	6.17
4	.2043	.009	.2133	7.84	.018	.2223	7.81
5	.1819	.009	.1909	9.88	.014	.1959	9.84
6	.1620	.009	.1700	12.44	.014	.1760	12.37
7	.1443	.009	.1523	15.66	.014	.1583	15.58
8	.1285	.009	.1375	19.71	.014	.1425	19.6
9	.1144	.006	.1204	24.81	.012	.1264	24.71
10	.1019	.006	.1079	31.21	.012	.1119	31.07
11	.0907	.006	.0967	39.5	.010	.1007	39.12
12	.0808	.005	.0858	49.83	.010	.0908	49.12
13	.0720	.005	.0770	62.71	.009	.0820	62.00
14	.0641	.005	.0691	78.79	.009	.0731	77.86
15	.0571	.005	.0621	99.27	.009	0661	97.80
16	.0508	.005	.0558	125.09	.009	.0598	122.91
17	.0452	.005	.0502	157.59	.009	.0542	154.04
18	.0403	.005	.0453	198.31	.009	.0493	193.64
19	.0359	.005	.0409	249.19	.009	.0449	233.16
20	.032	.005	.0370	313.	.009	.0410	303.
21	.0285	.005	.0335	394.	.009	.0375	379.
22	.0253	.0045	.0298	493.	.009	.0343	471.
23	.0226	.0045	.0271	618.	.009	.0316	584.
24	.0201	.0045	.0246	773.	.009	.0291	726.
25	.0179	.00425	.02215	982.	.0085	.0264	932.
26	.0159	.00425	.02015	1228.	.0085	.0244	1149.
27	.0142	.00425	.01845	1533.	.0085	.0227	1419.
28	.0126	.00425	.01685	1907.	.0085	.0211	1739.
29	.0113	.00425	.01555	2365.	.0085	.0198	2130.
30	.01002	.00425	.01427	2945.	.0085	.01852	2606.
31	.00892	.00425	.01317	3680.	.0085	.01742	3233.
32	.00795	.00425	.01220	4542.	.0085	.01645	3894.
33	.00708	.00425	.01333	5569.	.0085	.01558	4666.
34	.0063	.00425	.01055	6000.	.0085	.01480	5477.
35	.00561	.00425	.00986	8331.	.0085	.01411	6602.
36	.005	.00425	.00925	9960.	.0085	.0135	7556.
37	.00445	.00425	.00870	10884.	.0085	.01295	8462.
38	.00396	.00425	.00821	13536.	.0085	.01246	9860.
39	.00353	.00425	.00778	16174.	.0085	.01203	12052.
40	.00314	.00425	.00739	19900.	.0085	.01164	14334.
		Single Silk Covered			Double Silk Covered		
16	.0508	.002	.0528	127	.0035	.0543	126
17	.0452	.002	.0472	160	.0035	.0487	159
18	.0403	.002	.0423	201	.0035	.0438	199
19	.0359	.002	.0379	253	.0035	.0394	250
20	.032	.002	.034	319	.0035	.0355	314
21	.0285	.002	.0305	402	.0035	.032	396
22	.0253	.002	.0273	506	.0035	.0288	498
23	.0226	.002	.0246	637	.0035	.0261	626
24	.0201	.002	.0221	802	.0035	.0236	787
25	.0179	.002	.0199	1009	.0035	.0214	990
26	.0159	.002	.0179	1268	.0035	.0198	1242
27	.0142	.002	.0162	1595	.0035	.0177	1560
28	.0126	.002	.0146	2004	.0035	.0161	1946
29	.0113	.002	.0133	2516	.0035	.0148	2431
30	.01002	.002	.01202	3145	.0035	.01352	3030
31	.00892	.002	.01092	3930	.0035	.01242	3763
32	.00795	.002	.00995	4923	.0035	.01145	4662
33	.00708	.002	.00908	6156	.0035	.01058	5800
34	.0063	.002	.0083	7671	.0035	.0098	7064
35	.00561	.002	.00761	9547	.0035	.00911	8666
36	.005	.002	.007	11836	.0035	.0085	10832
37	.00445	.002	.00645	13396	.0035	.00795	12149
38	.00396	.002	.00596	16656	.0035	.00746	14776
39	.00353	.002	.00553	20678	.0035	.00703	18369
40	.00314	.002	.00514	25628	.0035	.00664	22052

Magnet Wire Reels and Spools

Size B.&S. No.	Kind of Cover	Reel No.	Diam. In.	Lbs. per Reel	Size B.&S. Nos.	Kind of Cover	Reel No.	Diam. In.	Lbs. per Reel
*1	.....	1	28	200	27-31	Cotton	15	5	2-5
1-14	.....	2	23	200	27-31	Silk	15	5	4-8
15-18	.....	11	13	50	32-36	Cotton	16	4	1-2½
19-21	.....	13	9	25	32-36	Silk	16	4	1-5
22-26	Cotton	14	6	7-10	36-40	Cotton	17	3	1-2
21-26	Silk	14	6	8-12	37-40	Silk	17	3	1-2

*No. 1 and larger.

Square and Rectangular Magnet Wire

Increasing attention is being given to the economies to be secured by the substitution of Square or Rectangular for round magnet wire. When round wire is used, considerable space is wasted, even when turns are fitted together as closely as possible, whereas the waste spaces are filled when square or rectangular wire is used, and a greater current carrying capacity secured.

Square Magnet Wire

Square magnet wire can be furnished in all sizes from number 14 to 0000 B. & S. gauge. (In computing the gauge the diameter of round wire is comparable to the thickness of square wire.) Sizes smaller than No. 14 cannot be regularly procured owing to the difficulty of winding.

Rectangular Magnet Wire

Rectangular magnet wire sizes have not, as yet, been standardized but can be supplied in sizes from .410 to .020 in thickness and from .460 to .064 in width and the regular insulation is double cotton wound. Rectangular wire is not carried in stock, but made specially on order, and in view of this, orders should not be for less than 200 pounds of any size.

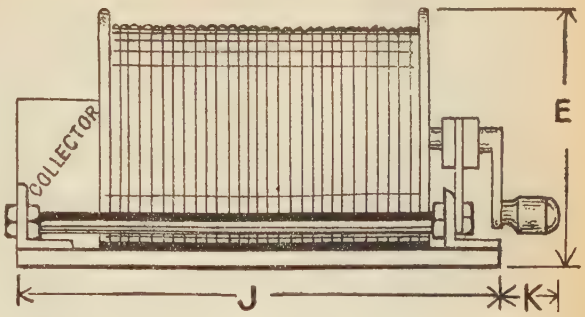
Prices on square and rectangular magnet wire will be quoted upon application.

Round Enameled and Cotton Covered Magnet Wire

Size B&S	Over All Diam. E&SCC In.	Over All Diam. E&DCC In.	Enamel SCC Feet per Lb.	Enamel SCC Lbs. to Reel or Spool	Enamel DCC Feet per Lb.	Enamel DCC Lbs. to Reel or Spool	Diam. Reel or Spool In.
10	.1101	.1053	30.77	200	30.42	200	23
11	.0989	.1029	39.28	200	38.77	200	23
12	.0880	.093	49.01	200	48.26	200	23
13	.0791	.0831	62.28	200	61.22	200	23
14	.0712	.0752	78.76	200	77.39	200	23
15	.0642	.0682	99.30	50	97.25	50	13
16	.0579	.0619	124.17	50	121.27	50	13
17	.0523	.0563	155.97	50	151.90	50	13
18	.0471	.0511	195.78	50	189.63	50	13
19	.0427	.0467	253.40	25	242.96	25	9
20	.0387	.0427	308.41	25	295.90	25	9
21	.0350	.0390	386.04	25	367.75	25	9
22	.0313	.0358	487.04	8	463.54	10	6
23	.0286	.0331	608.02	8	575.18	6	6
24	.0260	.0305	761.44	8	711.39	6	6
25	.02355	.0278	946.61	8	874.89	6	6
26	.02145	.0257	1,182.73	8	1,090.86	6	6
27	.01985	.0240	1,480.60	5	1,346.60	3	5
28	.01815	.0223	1,859.77	4	1,658.40	3	5
29	.01685	.0210	2,310.54	4	2,006.02	3	5
30	.01517	.01942	2,850.87	4	2,456.58	2	5
31	.01407	.01832	3,535.69	2½	2,986.59	2	5
32	.01310	.01735	4,358.25	2	3,550.51	1	4
33	.01213	.01638	5,314.34	2	4,212.83	1	4
34	.01125	.0155	6,458.70	1	4,872.58	1	4
35	.01056	.01481	7,552.30	1	5,668.61	1	4
36	.00985	.0141	9,171.79	1	6,488.03	1	4

Gleason Hand-Wound Reels

Fire Department Reels



Designed to operate searchlights, etc. Capacity 60 amperes. All steel, ball-bearing with locking device. Painted gray; extra for fine coloring.

Dimensions: J, 24 inches; E, 12½ inches.

Capacity: 250 ft. No. 14 cable; 175 ft. No. 10; 175 ft. No. 8.

Reel Only.....each **$60.00**

Double capacity adds $20.00.

Type C Reels

Designed for stacking machines. Capacity: 50 ft. No. 10-3 cable; 70 ft. No. 14-3 cable.

Reel Only.....each **$30.00**

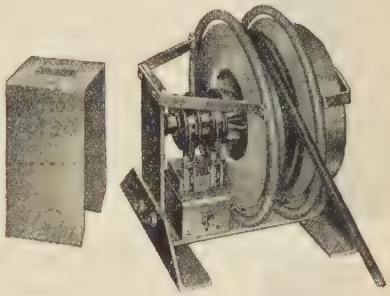
Outdoor Reels

For coal loading machines. Made of wood to prevent rust.

No.	Each	Capacity Cable Ft.	Size
A1	$48.00	125	10–4
A2	60.00	250	10–4
A3	125.00	300	4–3

Gleason Spring-Wound Reels

For Hoists, Cranes, Lifting Magneto, Etc.



No. S-15

Furnished with 18 ft. No. 14-3 cable. 30 amps.

No. S-**15**.....each **$45.00**

No. S-25

30 amps. Capacity: 25 ft. No. 10-3; 30 ft. No. 14-3.

No. S-**25** Reel Only.....each **$75.00**

No. S-60

60 amps. Capacity cable: 50 ft. No. 10-3; 40 ft. No. 6-2; 60 ft. No. 14-30

No. S-**60** Reel Only.....each **$90.00**

No. S-61

Special reel for monorail hoists designed to serve 100-ft. rail and not pull the hoist.

No. S-**61** Reel Only.....each **$95.00**

No. S-75

60 amps. Capacity cable: 100 ft. No. 14-3; 75 ft. No. 10-3; 60 ft. No. 6-3; 75 ft. No. 6-2.

No. S-**75** Reel Only.....each **$150.00**

No. S-100

60 amps. Capacity cable: 150 ft. No. 14-3; 100 ft. No. 10-3; 100 ft. No. 8-3; 100 ft. No. 6-2.

No. S-**100** Reel Only.....each **$200.00**

No. S-200

120 amps. For various larger and longer cables.

No. S-**200** Reel Only.....each **$400.00**

Motor-Driven Reels

For long heavy cables. Must be made to fit the application. Complete information upon request.

Friction Tape

Sticka Black Friction Tape

A popular-priced tape for general use.

Used to protect the splicing compound on a wire joint from abrasion.

Roll contains ½ pound gross of ¾-inch tape, length 60 feet to a roll.

Per Pound............ **$.90**

Victor Black Friction Tape

Protects the splicing compound on wire joints from abrasion.

A high grade tape for outside or inside work.

Roll contains ½ pound gross of ¾-inch tape, 67½ feet to a roll.

Per Pound........... **$1.00**

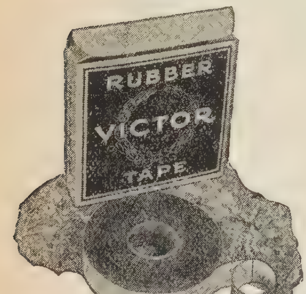
Amazon ASTM Black Friction Tape

Highest quality friction tape to meet the most strict specifications.

Standard rolls contain ½ pound net of ¾-inch tape, which is 82½ feet to a roll.

Per Pound........... **$1.25**

Splicing Tape



Victor Black Rubber Splicing Tape

A good grade, unvulcanized compound.

Will fuse into a homogeneous mass at average air temperature under heat of the fingers.

Half-pound roll gross, .030 inch thick, 21 feet to a roll.

Per Pound........... **$1.00**

Amazon ASTM Gray Rubber Splicing Tape

A compound of the best quality, partially unvulcanized, high in dielectric and tensile strength.

The adjacent layers adhere readily on a joint and become a solid, homogeneous mass.

Roll weight ½ pound net, ¾-inch tape, .030-inch thick, 26 feet to roll.

Per Pound **$1.25**

Manson Friction Tape

Has a closely woven cotton fabric of highest quality into which has been frictioned (on both sides) a rubber compound containing new Heavea rubber with chemically pure admixture.

Rolls, ¾ in. wide, containing 78 feet, black, per lb............... **$1.10**

Okonite Rubber Tape

Made from fine Up-River Para rubber. Ingredients are selected, prepared and mixed with care.

Impervious to moisture.

Rolls, ¾ in. wide, containing 30 feet, black, per lb.................... **$1.70**

Hydro-Proof Tape

A waterproof tape with an average dielectric strength per layer of 1850 volts.

Width, ¾ inch.

Packed 24 yards per 8-ounce roll.

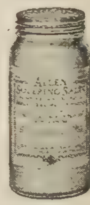
Per Pound.................. **$1.00**

Cresoent Chatterton Compound

This is an insulating material used chiefly in submarine cable construction to fill the interstices between the strands of the cable conductors.

No. **1** Domestic............................per lb. **$2.00**

Allen Sodering Salts



These salts are dry and in concentrated form. To make up a perfect flux of sufficient strength to use on old metal add 3 parts water to 1 part salts; on new metal, use even greater dilution.

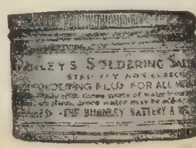
½-Pound Bottles.....................each **$.40**
1-Pound Bottles.....................each **.59**
5-Pound Bottles.....................each **2.70**

Crescent Soldering Salts

A combination of several of the most efficient soldering agents in a convenient soluble form. Gives off no obnoxious gases. Much superior to old time acids for the designed purpose.

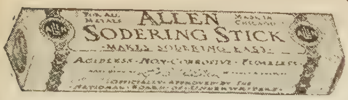
Price, Nò. **2779**, 1-pound...............each **$.90**
" " **2780**, ½ " .... " **.68**

Burnley's Soldering Salts



Size Can Lbs.	Price per Pound — Quantity, Pounds: 1 to 25	25 to 100	100 to 200	300 Lbs. and over
½	$.65	$.58	$.53	$.48
1	.62	.55	.50	.46
5	.48	.42	.38	.36

Allen Soldering Sticks



An economical rapid flux. Just a touch to the hot metal does the work.

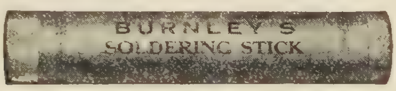
Fuses the solder rapidly without fuss, muss or after corrosion. Size, 1x5¼ inches.

Samson Formula....................................each $.15
Standard Formula..................................each .30

Star and Crescent Soldering Sticks

An economical, quick acting and reliable solder stick.
Each.. $.30

Burnley's Soldering Sticks



Size of stick: 6 inches long, 1 inch diameter.
Standard package, 3 dozen in a carton.

Each.. $.30

Allen Soldering Paste

A corrosion free, soft form of flux.

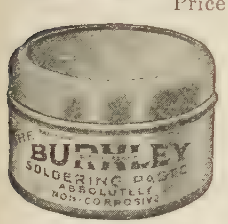
Job Size..............................each $.08
2-Ounce Can...........................each .13
2-Ounce Tube..........................each .25
4-Ounce Can...........................each .25
½-Pound Can...........................each .50
1-Pound Can...........................each .90
5-Pound Can...........................each 4.40

Star and Crescent Soldering Paste

Assures a smooth, even-flowing metal and perfect results. Thoroughly mixed, so that each paste particle contains all the flux elements. Strong and rapid in action and non-corrosive. Packed in tin boxes.

Cat. No.	2775	2776	2777	2778
Size Tins.....oz.	2	4	8	16
Price.....each	$.30	.40	.70	1.20

Burnley Soldering Paste



Requires no preparation, always ready for instant use.

Size Can	Price Each	Size Can	Price Each
2-Oz.	$.30	5-Pound	$6.50
4-Oz.	.50	10-Pound	....
½-Pound	.90	50-Pound	....
1-Pound	1.40	....	....

Nokorode Soldering Paste

This paste will flux all metals except aluminum. It takes the place of acid in all soldering jobs. Non-corrosive, safe as resin and rapid as acid. Not affected by heat and does not spatter. The solder will not turn dark after using.

Size Can	Standard Package	Price Each	Price per Carton
2 Oz.	12 to Carton	$.15	$1.20
1 Lb.	6 to Carton	.90 Lb.	4.50
10 Lb.	Any Quantity	.50 Lb.	....
25 Lb.	Any Quantity	.45 Lb.	....
50 Lb.	Any Quantity	.43 Lb.	....
500 Lb.	In Barrel	.40 Lb.	....

Sherman Set Screw Connectors

Number Plainly Stamped on Each Connector. A great help in re-ordering and saves much time and possible mistakes in sorting small mixed stocks.

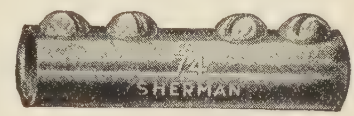
Screws Heavily Galvanized, Hence Rust-proof. This prevents rusting in dealer's stock, and enables consumer to use connectors over again when removed from temporary work.

Neatly Boxed and Plainly Labeled. Insuring neat shelf stock.

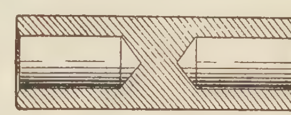
These connectors are made from solid brass rod; all dimensions and proportions are carefully held to accurate size.

Four-screw connectors are made also with hole clear through, and two-screw connectors can be furnished in divided wall style.

For Stranded Cable
With Divided Wall



No. 74 Connector

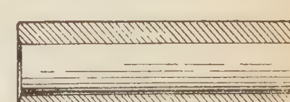


Showing Interior Construction

Cat. No.	Size Stranded Cable	Screws	Diam. Hole In.	Outside Diam. In.	Length In.	Std. Pkg.	Wt., Lbs. Std. Pkg.
60	12, 14	2	.110	¼	1¼	200	4
61	10	2	.140	5/16	1¼	200	5½
62	10	4	.140	5/16	1½	200	7
63	8	2	.160	5/16	1¼	200	5½
64	8	4	.160	5/16	1½	200	6½
65	6, 7	2	.209	⅜	1¼	150	5½
66	6, 7	4	.209	⅜	1½	150	7
67	4, 5	2	.265	7/16	1½	100	6
68	4, 5	4	.265	7/16	1⅞	100	7
69	2, 3	2	.312	½	1½	100	6½
70	2, 3	4	.312	½	1⅞	100	9
71	0, 1	4	.390	9/16	2¼	50	5½
72	00	4	.437	⅝	2½	50	7½
73	000	4	.500	¾	2⅞	25	6½
74	0000	4	.562	⅞	2⅞	25	9¼

For Solid and Stranded Cable
Wire Holes Extending Clear Through

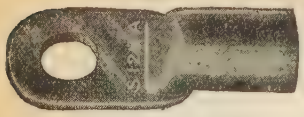
No. 5 Connector



Showing Construction

Cat. No.	Max. Solid	Wire Str.	Screws	Diam. Hole In.	Outside Diam. In.	Length In.	Std. Pkg.	Wt., Lbs. Std. Pkg.
0	12	....	2	.106	5/16	1½	100	3¾
1	8	9	2	.147	5/16	1½	100	3½
2	6	7	2	.185	⅜	1¾	100	5
3	4	5	2	.228	7/16	1⅞	100	7
4	2	3	2	9/32	½	1⅞	100	8½
5	0	1	2	11/32	9/16	1⅞	50	5
6	00	0	2	⅜	⅝	1⅞	50	6
7	4	5	4	.228	7/16	1⅞	100	7½
8	2	3	4	9/32	½	1⅞	100	.9
9	0	1	4	11/32	9/16	1⅞	50	5½
10	00	0	4	⅜	⅝	1⅞	50	6¾
11	000	00	4	7/16	11/16	2	50	7½
12	0000	000	4	½	¾	2	50	8½
13	....	0000	4	9/16	⅞	2 3/16	25	6¾

Sherman Soldering Lugs



U. S. Pat. Reissue 14401

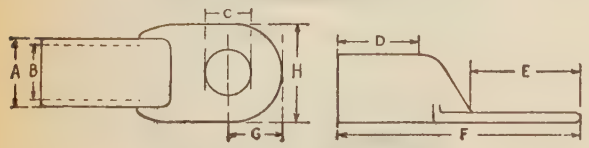
Lugs are seamless all around. The solder cannot leak out at the closed end. Also better conductivity is secured. Round end lugs in small sizes are recommended.

These soldering lugs or drawn copper terminals are now approved and listed by the Underwriters' Laboratories. The requirements are exacting, and the designs and dimensions have been carefully worked out.

Round End

Size Inches	Amp. Cap. Rubber Insl. Conductors N. E. C. Std.	Maximum Stranded Wire B. & S. Gauge	Approx. Weight Pounds per 1000
3/16	25	10	4
1/4	35	8	5 1/4
5/16	50	6	11
3/8	70	4	17
7/16	90	2	24
1/2	125	0	32
9/16	150	00	43
5/8	175	000	60
11/16	225	0000	78
13/16	237	*250000	145

Dimensions



Approximate Dimensions, Inches

A	B	C	D	E	F	G	H
3/16	.1368	11/64	3/8	15/32	15/16	7/32	17/64
1/4	.186	13/64	3/8	1/2	1 1/32	7/32	3/8
5/16	.232	13/64	3/8	19/32	1 7/32	1/4	7/16
3/8	.285	9/32	7/16	11/16	1 11/32	9/32	17/32
7/16	.336	9/32	1/2	3/4	1 1/2	11/32	5/8
1/2	.398	11/32	5/8	13/16	1 3/4	13/32	3/4
9/16	.461	13/32	11/16	15/16	2	7/16	13/16
5/8	.511	13/32	25/32	1	2 1/8	1/2	29/32
11/16	.559	13/32	27/32	1 5/32	2 9/32	17/32	31/32
13/16	.651	13/32	31/32	1 1/4	2 5/8	5/8	1 3/16

Square ends furnished in above sizes, if required. Bottom not seamless. Over all dimensions the same.

Square End

Size Inches	Amp. Cap. Rubber Insl. Conductors N. E. C. Std.	Maximum Stranded Wire B. & S. Gauge	Approx. Weight Pounds per 1000
15/16	325	*400000	225
1	362	*450000	285
1 1/16	400	*500000	370
1 1/8	450	*600000	410
1 5/16	550	*800000	715
1 1/16	650	*1000000	760
1 3/4	850	*1500000	1470
2 1/16	1050	*2000000	2700

Approximate Dimensions, Inches

A	B	C	D	E	F	G	H
15/16	.776	13/32	1 3/16	1 5/8	3 3/8	3/4	1 13/32
1	.82	13/32	1 1/4	1 3/4	3 7/16	13/16	1 1/2
1 1/16	.88	13/32	1 1/2	2 1/8	4 1/16	15/16	1 9/16
1 1/8	.943	13/32	1 5/8	2 1/4	4 7/16	1	1 11/16
1 5/16	1.084	17/32	2	2 1/2	5	1 1/8	1 15/16
1 7/16	1.21	29/32	2	2 1/2	5 3/8	1 3/16	2 1/8
1 3/4	1.46	1 1/32	2 3/8	3 1/8	6 5/8	1 7/16	2 5/8
2 1/16	1.66	1 1/32	2 5/8	3 5/8	7 1/2	1 5/8	3 1/16

*Circular mils. Sizes 1/4 to 13/16-inch furnished round end, unless otherwise specified. Sizes 15/16-inch and larger furnished square end unless otherwise specified.

Stud Hole.—Lugs furnished with special size or location of stud holes at same prices as for regular lugs, with extra charge for each size.

Tinning.—Lugs tinned inside of tubular portion will be furnished at extra charge, depending on size.

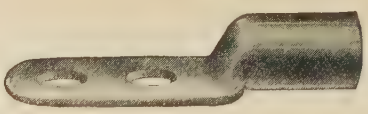
Marking.—For identification, as approved fittings, lugs will be marked with letter S and Underwriters' rating in amperes, placed crosswise of the flat portion at wire end.

To Select Terminals According to the N.E.C. Ratings Governing Knife Switches, Use the Following Equivalents

Capacity..amperes	30	60	100	200	400	600	800	1000
Size Lug....inches	1/4	3/8	1/2	11/16	1 1/16	1 7/16	1 3/4	2 1/16

Sherman Soldering Lugs

2-Hole



Two-hole lugs are made from seamless tubing and furnished square end, unless otherwise specified.

Flat portion (E) may be made to order either longer or shorter but tubular portion (D) cannot be changed.

Size Inches	Amp. Cap. Rubber Insl. Conductors N. E. C. Std.	Max. Stranded Wire B & S Gauge	Approx. Weight Pounds per 1000
3/16	25	10	5
1/4	35	8	8
5/16	50	6	14
3/8	70	4	23
7/16	90	2	34
1/2	125	0	46
9/16	150	00	68
5/8	175	000	90
11/16	225	0000	115
13/16	250	250000 c. m.	218
15/16	325	400000 c. m.	270
1 1/16	400	500000 c. m.	420
1 1/8	450	600000 c. m.	475
1 5/16	550	800000 c. m.	845
1 7/16	650	1000000 c. m.	1030
1 3/4	850	1500000 c. m.	1850
2 1/16	1050	2000000 c. m.	3200

Tinning.—Lugs tinned inside of tubular portion will be furnished at extra charge, depending on size.

Marking.—For identification as approved fittings, lugs will be marked with leter S and Underwriters' rating in amperes, placed crosswise of the flat portion at wire end.

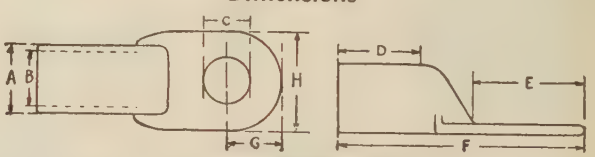
2-Hole, Center Formed and Angle Lugs

These types are standard but not regularly carried in stock. Will be made up promptly to order at percentage listed below, added to price of regular lugs plus net charges listed.

3/16 to 9/16 Inch Inclusive.....add 75% plus **$3.00** net
5/8 to 13/16 Inch Inclusive.....add 75% plus **4.25** net
15/16 to 1 1/8 Inches Inclusive.....add 75% plus **5.50** net
1 5/16 to 1 7/16 Inches Inclusive.....add 50% plus **7.50** net
1 3/4 Inches.....add 50% plus **9.00** net
2 1/16 Inches.....add 50% plus **11.00** net

Above net charges must be added for each different size of lugs ordered. These net charges cover special machine set-up expense regardless of quantity of lugs ordered.

Dimensions



Approximate Dimensions, Inches

A	B	C	D	E	F	G	H	J
3/16	.1368	5/32	3/8	3/4	17/32	5/32	17/64	3/8
1/4	.186	3/16	3/8	7/8	1 13/32	3/16	3/8	7/16
5/16	.232	7/32	3/8	1 1/16	1 3/4	1/4	7/16	1/2
3/8	.285	1/4	7/16	1 1/4	1 23/32	5/16	17/32	5/8
7/16	.336	9/32	1/2	1 3/8	2 1/8	5/16	5/8	11/16
1/2	.398	11/32	5/8	1 11/16	2 5/8	3/8	3/4	7/8
9/16	.461	13/32	11/16	2	3 1/16	7/16	13/16	1
5/8	.511	13/32	25/32	2	3 1/8	7/16	29/32	1
11/16	.559	13/32	27/32	2 1/8	3 1/4	1/2	31/32	1
13/16	.651	17/32	31/32	2 5/8	4	5/8	1 3/16	1 1/4
15/16	.776	17/32	1 3/16	2 3/4	4 1/2	11/16	1 13/32	1 1/4
1 1/16	.88	21/32	1 1/2	3 1/4	5 3/16	13/16	1 9/16	1 1/2
1 1/8	.943	21/32	1 5/8	3 3/8	5 9/16	7/8	1 11/16	1 1/2
1 5/16	1.084	25/32	2	3 15/16	6 7/16	1	1 15/16	1 13/16
1 7/16	1.21	29/32	2	4 3/8	7 1/4	1 1/8	2 1/8	2
1 3/4	1.46	1 1/32	2 3/8	5 1/8	8 5/8	1 3/8	2 5/8	2 1/4
2 1/16	1.66	1 1/32	2 5/8	5 3/8	9 1/4	1 1/2	3 1/16	2 1/4

Sherman Heavy Duty Soldering Lugs

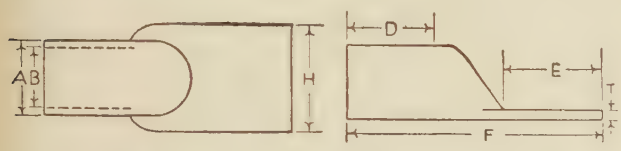
N.E.L.A. Standard

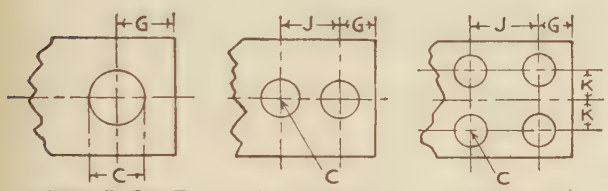
2-Bolt Tongue

These lugs are made of best quality seamless copper tubing.

Lugs Nos. 8, 8-A, 9-A, 10 and 11 have a sufficient socket diameter to take rope core cables of sizes listed without removing core. Core can be drilled out and space filled with copper plug or solder.

Blank lugs furnished when specified; otherwise regular bolt holes as listed. Special drilling may be had if specified. Straight lugs regularly furnished. Angle lugs 45 and 90-degree when specified at extra price. Plain finish unless otherwise specified. Special finishes as follows at added prices: Rosin dipped, cadmium plated, tinned inside only and tinned all over. Special dimensions may be made to order with dimension E other than regular or special drilling of stud holes, at added cost.





SINGLE BOLT TWO BOLT FOUR BOLT

Max. Size Conductor Inches	Amp. Rate N.E.C.	Single Bolt Lug No.	Single Bolt Wt., Lbs. per 1000	2-Bolt Lug No.	2-Bolt Wt., Lbs. per 1000	4-Bolt Lug No.	4-Bolt Wt., Lbs. per 1000
19/22	35	1	8	1A	12	....	....
6, B. & S.	50	2	18	2A	25	....	....
2	90	3	80	3A	105	....	....
00	150	4	155	4A	210	....	....
250000	250	5	275	5A	330	....	....
350000	300	6	540	6A	650	....	....
500000	400	.	....	7	1350	....	....
750000	525	.	....	8	2000	8A	2000
1000000	650	.	....	9	3200	9A	2800
1500000	850	.	....	....	....	10	5000
2000000	1050	.	....	....	....	11	8300

Single Bolt Tongue

Lug No.	Approximate Dimensions, Inches A	B	H	D	T	E	F	G	J	K	C
1	.25	.187	.39	.375	.06	.50	1	3/16			7/32
2	.313	.232	.47	.50	.08	.75	1 1/2	3/8			7/32
3	.540	.375	.74	.75	.17	.87	2	3/8			9/32
4	.675	.494	.97	1.00	.19	1.25	2 3/4	1/2			13/32
5	.840	.625	1.22	1.25	.22	1.50	3 1/4	3/4			17/32
6	1.050	.822	1.50	1.69	.23	2.25	4 3/4	1			17/32

Two-Bolt Tongue

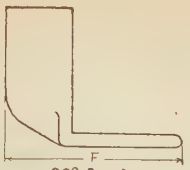
Lug No.	A	B	H	D	T	E	F	G	J	K	C
1-A	.25	.187	.39	.375	.06	1.00	1 1/2	3/16	1/2		7/32
2-A	.313	.232	.47	.50	.08	1.25	2	1/4	5/8		7/32
3-A	.540	.375	.74	.75	.17	1.50	2 5/8	3/8	5/8		9/32
4-A	.675	.494	.97	1.00	.19	2.25	3 3/4	1/2	1		13/32
5-A	.840	.625	1.22	1.25	.22	2.25	4	1/2	1		13/32
6-A	1.050	.822	1.50	1.69	.23	3.25	5 3/4	3/4	1 1/2		17/32
7	1.315	.951	1.87	2.00	.37	3.25	6 1/4	3/4	1 1/2		17/32
8	1.66	1.272	2.41	2.56	.39	3.25	6 7/8	3/4	1 1/2		17/32
9	1.90	1.49	2.74	3.00	.41	4.25	8 7/8	1	2		17/32

Four-Bolt Tongue

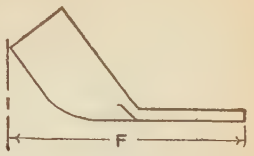
Lug No.	A	B	H	D	T	E	F	G	J	K	C
8-A	1.66	1.272	2.41	2.56	.39	3.25	6 7/8	3/4	1 1/4	5/8	13/32
9-A	1.90	1.49	2.74	3.00	.41	3.25	7 7/8	3/4	1 1/2	3/4	13/32
10	2.37	1.93	3.50	3.87	.44	4.25	10	1	2	1	17/32
11	2.87	2.315	4.25	4.37	.56	4.25	11	1	2	1	17/32

NOTE.—Dimensions E in larger sizes will be found slightly larger than specified to allow for bending in the field.

Sherman Soldering Lugs



90° Angle



45° Angle

Dimensions and specifications the same as for regular side formed lugs, except dimension F as shown below.

Size In.	Dimen. F, In. 90°	45°	Size In.	Dimen. F, In. 90°	45°	Size In.	Dimen. F, In. 90°	45°
3/16	11/16	1 3/16	9/16	1 9/16	1 15/16	1 1/16	3 1/4	4 3/8
1/4	1 3/16	1 1/8	5/8	1 11/16	2 3/16	1 1/8	3 1/2	4 3/4
5/16	1 5/16	1 3/16	11/16	1 7/8	2 7/16	1 5/16	3 15/16	5 5/16
3/8	1 1/8	1 7/16	13/16	2 1/8	2 7/8	1 7/16	4 1/16	5 11/16
7/16	1 1/32	1 9/16	15/16	2 5/8	3 5/8	1 3/4	5	6 15/16
1/2	1 3/8	1 3/4	1	2 13/16	3 3/4	2 1/16	5 13/16	7 15/16

Sherman Drawn Copper Connectors

The connector consists of two seamless terminals, so constructed that when bolted together both halves are in perfect alignment, and no part projects beyond the circumference of the tubular portion, so that a piece of flexible conduit or fibre sleeve may be slipped over the entire connection for insulation.

While two pieces are required to make one complete connector, they are described and listed by single pieces. Connectors are not shipped assembled, as they cannot be applied in that way.

On account of its small size, only the 1/4-inch connector is made wider than tubular part.

Size (A) In.	Maximum Stranded Wire B & S Gauge	Approximate Dimensions, Inches B	C	D	E	F	G	H	Approx. Wt., Lbs. per 1000
1/4	8	.186	11/64	3/8	19/32	1 1/32	9/32	3/8	9

These sizes have two stud holes. Two bolts and nuts are required for each complete connector, consisting of two pieces.

Size (A) In.	Maximum Stranded Wire B & S Gauge	Approximate Dimensions, Inches B	C	D	E	F	G	H	Approx. Wt., Lbs per 1000
3/8	4	.285	11/64	9/16	29/32	1 5/8	7/32	3/8	25
1/2	0	.398	11/64	3/4	1 1/4	2 3/16	9/32	5/8	52
5/8	000	.511	17/64	15/16	1 9/16	2 11/16	3/8	7/8	85
13/16	250000 CM	.651	17/64	1 1/4	2 1/16	3 5/8	7/16	1 1/8	228
15/16	400000 CM	.776	21/32	1 1/2	2 5/16	4	1/2	1 1/4	250
1	450000 CM	.82	21/32	1 1/2	2 7/16	4 3/16	1/2	1 1/4	310
1 1/16	500000 CM	.88	13/32	1 3/4	2 9/16	4 1/2	5/8	1 1/4	325
1 5/16	800000 CM	1.084	17/32	2	2 11/16	5	5/8	1 3/8	350
1 3/4	1500000 CM	1.46	17/32	2 3/8	3 3/8	6 3/8	3/4	1 3/4	625
2 1/16	2000000 CM	1.66	21/32	2 5/8	3 3/8	6 3/4	3/4	1 3/4	1350

Bolts and nuts will not be furnished unless specified. Can be furnished plain or coppered.

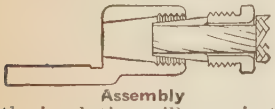
Nuts and Bolts

Size Connector Inches	Size Bolts Inches	No. in Standard Package	Approx. Wt., Lbs. per 1000
1/4, 3/8, 1/2	5/32 x 1/4	1000	7
5/8, 13/16	1/4 x 3/8	500	17
15/16	5/16 x 5/8	200	32
1	5/16 x 3/4	200	33
1 1/16	3/8 x 3/4	200	57
1 5/16	1/2 x 15/16	100	113
1 3/4	1/2 x 1 1/8	50	134
2 1/16	5/8 x 1 7/16	50	248

T & B Tite-Bind Solderless Connectors

T & B Tite-Bind Connectors and Lugs are designed to give the best electrical contact and mechanical connection, utilizing a principle unique in this field.

The bore of the body has a slight (3°) taper into which the tapered sleeve is forced by the bushed nut. Corrugations in the sleeve form numerous line contacts, increase the area of contact and strengthen the mechanical grip. The sleeve exerts a uniform pressure on the cable throughout its length.



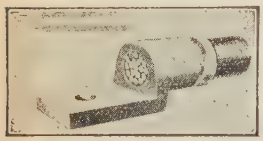
If the insulation is cut the length of the sleeve and nut, when the nut is made up, the cable travels with the sleeve into the connector body and the insulation will remain tight against the nut.

As the sleeve travels into the body the slight tapers exert a great pressure on the cable. This maximum pressure produces the minimum electrical resistance and the maximum mechanical grip.

The open end of the lug offers visual evidence that the cable is of proper size and in place.

Once made up tight, the sleeve stays wedged in place and exerts the same pressure on cable even with nut removed.

Solderless Lugs

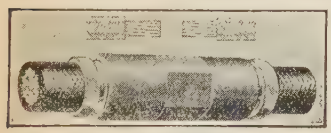


Tite-Bind Solderless Lugs are for connecting wire, cable, or tubing to terminals on equipment, to bus bars, etc.

Front-connected lug as illustrated, with either one or two bolt holes is standard, with standard tongue dimensions and drillings. For special tongue dimensions and drillings, add 20 per cent to list price.

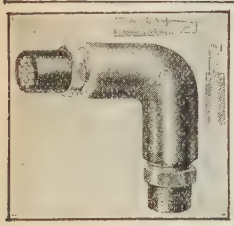
Center-formed lugs, angle lugs, round-tongue lugs, and other varieties will be furnished at an increase in price.

2-Way Connectors



Used for splicing the ends of conductors of the same size.

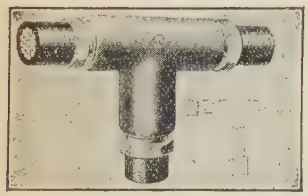
Reducers for splicing the ends of two conductors of different sizes can also be furnished.



Elbow Connectors

Elbow connectors are used for splicing two conductors at right angles and are useful where short bends must be made in heavy conductors.

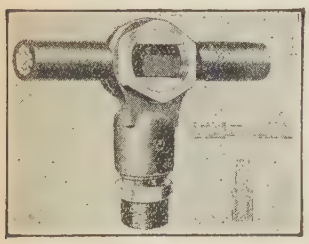
Reducing elbows and elbows of other angles are also furnished.



3-Way Connectors

The 3-way connectors are used to splice three conductors of the same size or of different sizes.

The T or right angle type is illustrated. The Y type is also regularly furnished.



Cable Taps
Tee Taps

Tite-Bind Cable Taps utilize the same connection principle as Tite-Bind Lugs for the branch conductor. The connection to the main conductor is made with a U-bolt and seat shaped to fit the conductor and clamped to it without splicing.

They are used to tap a main conductor at right angles, and are regularly furnished for all combinations of main and branch conductor sizes.

T & B Tite-Bind Solderless Connectors

Parallel Gutter Taps

Tite-Bind Parallel Taps are similar in design to the cable taps, except that the main and branch conductor connections are parallel.

Used to tap a main conductor where space is limited, as in panel board gutters, etc. Regularly furnished for all combinations of main and branch conductor sizes.

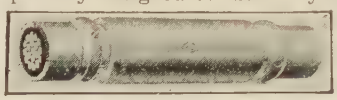
Connecting Blocks

The 3-way connecting block is illustrated, but connecting blocks are furnished for any number of conductors and any combination of sizes.

Additional Designs

Only a few of the more popular types of connectors are illustrated. Other types are designed for all types of transmission line, high tension and special installations. There are connectors designed to hold in excess of the cable strength. For example, a T & B 2-Way Connector of special construction has been approved for use with Type HH cable, the connector developing the full cable strength.

T & B Solderless Connectors or related material will be specially designed to meet any special requirements.



All T & B Solderless Connectors can be furnished with parts rounded for high tension installation, as illustrated.

Size Conductor A.W.G.	Standard Lugs 1 Bolt Hole Each	Standard Lugs 2 Bolt Holes Each	2-Way and Elbows Each	3-Way T or Y Type Each	Cable Taps Each	Parallel Gutter Taps Each
14	$.20	$.30	....	.....	.....	....
12	.20	.30	....	.....	.....	....
10	.20	.30	$.40	$.60	$.60	$.60
8	.20	.30	.40	.60	.60	.60
6	.25	.35	.40	.60	.60	.60
4	.25	.35	.40	.60	.70	.60
2	.35	.45	.50	.75	.75	.70
1	.35	.45	.50	.75	.85	.70
0	.45	.55	.60	.90	.90	.70
00	.55	.65	.75	1.10	1.00	.70
000	.75	.85	.90	1.35	1.20	.80
0000	.75	.85	1.10	1.65	1.20	1.00
C. M.						
250000	.95	1.05	1.30	1.95	1.50	1.10
300000	.95	1.05	1.50	2.25	1.50	1.25
350000	1.20	1.40	1.75	2.60	2.10	1.40
400000	1.20	1.40	2.00	3.00	2.10	1.45
450000	1.45	1.65	2.30	3.45	2.60	1.85
500000	1.45	1.65	2.60	3.90	2.60	2.10
550000	1.80	2.00	3.00	4.50	3.40	2.30
600000	1.80	2.00	3.25	4.85	3.40	2.50
650000	1.80	2.00	3.50	5.25	4.00	2.50
700000	2.50	2.50	3.75	5.60	4.00	2.80
750000	2.50	2.50	4.00	6.00	4.80	2.95
800000	2.50	2.50	4.25	6.35	4.80	3.25
850000	2.90	3.20	4.50	7.10	6.00	3.25
900000	2.90	3.20	4.75	7.10	6.00	3.70
950000	2.90	3.20	5.00	7.50	6.60	3.80
1000000	2.90	3.20	5.00	7.50	6.60	3.80
1100000	4.10	4.10	6.00	9.00	8.10	....
1200000	4.10	4.10	6.00	9.00	8.10	....
1400000	5.50	5.50	7.00	10.50	10.00	....
1500000	5.50	5.50	7.00	10.50	10.00	....
1600000	6.40	6.40	8.00	12.00	11.60	....
1700000	6.40	6.40	8.00	12.00	11.60	....
1800000	6.40	6.40	9.00	13.50	13.50	....
1900000	7.40	7.40	9.00	13.50	13.50	....
2000000	7.40	7.40	9.00	13.50	13.50	....

When ordering, give size and type of conductor being used. Connectors will be furnished for stranded cable unless otherwise specified.

Reducers, reducing elbows, and 3-way connectors, cable taps, and parallel taps to take different sizes of cables are regularly furnished. Prices on these items, listings of other items, and dimensional data furnished on request.

Reliable Solderless Lugs

Solderless Lug

Showing Clamp Reversed
So That Screw Is Accessible
From the Opposite Side

Used for connecting electrical conductors to terminals of electrical equipment.

Only one piece to handle, conveniently and quickly installed with only a screwdriver or wrench. Will not vibrate loose.

Clamp of high strength bronze, lug of electrolytic copper, 98 per cent conductivity.

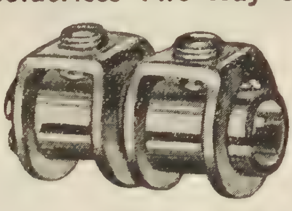
High pressure contact makes permanent low resistance connection. Cross section of lug at any point has full conductivity of cable. Runs cooler than well soldered joint, cooler even than the cable itself.

Eliminates hazard, uncertainty, inconvenience and lost time of soldered connections.

Straight Lugs, One Hole

No.	Each	Size	Wt. Lbs. per Carton	No. In Carton
6S1	$.20	6 Stranded	¾	24
4S1	.24	4 Stranded	1	24
2S1	.28	2 Stranded	1½	24
0S1	.40	1/0 Stranded	1½	12
00S1	.50	2/0 Stranded	1¾	12
000S1	.60	3/0 Stranded	2	12
0000S1	.80	4/0 Stranded	2¾	12
250S1	1.00	250,000 C M	1¾	6
300S1	1.20	300,000 C M	2¼	6
350S1	1.40	350,000 C M	2¾	6
400S1	1.60	400,000 C M	3	6
450S1	1.80	450,000 C M	3½	6
500S1	2.00	500,000 C M	4¼	6

Reliable Solderless Two Way Connectors



Tube of electrolytic copper, 98 per cent conductivity. Clamps of high strength bronze.

Used to splice two conductors of the same size end to end. Easily installed, will not vibrate loose, and makes permanent high pressure, low resistance connection.

No.	Each	Size	Wt. Lbs. per Carton	No. In Carton
6x6	$.28	6 Stranded	¾	24
4x4	.34	4 Stranded	1	24
2x2	.38	2 Stranded	1¾	24
0x0	.56	1/0 Stranded	1½	12
00x00	.70	2/0 Stranded	1¾	12
000x000	.90	3/0 Stranded	2¼	12
0000x0000	1.10	4/0 Stranded	3	12
250x250	1.30	250,000 C M	1¾	6
300x300	1.70	300,000 C M	2½	6
350x350	1.90	350,000 C M	2¾	6
400x400	2.20	400,000 C M	3	6
450x450	2.50	450,000 C M	4	6
500x500	2.70	500,000 C M	4¾	6

Reliable Solderless Connectors

For use wherever two wires, not under tension, must be connected. Hardware bronze connectors are recommended as they are free from season cracking.

The nut is reversible and a pilot aids in starting it.

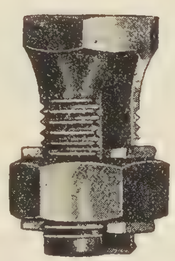
Edges are rounded to prevent wire nicks and glove cuts.

Head shape and material make for a strong, re-usable connector.

The efficient thread fit, bearing surface and contact design insure a high compression joint.

Packed in small cartons with quantity, catalogue number and wire size clearly marked on the ends of the carton.

Large Fillet Head Solderless Connectors



Hardware Bronze—85% Copper

Cat. No.	Per 100	A.W.G Solid	A.W.G Stranded	Shipping Wt. Lbs. Per 100	Std. Pkg.
165C	$24.00	6	8	6	100
206C	30.00	4	5	7½	100
260C	40.00	2	3	10	100
292C	51.00	1	2	14	100
373C	65.00	2/0	1/0	21	50
418C	80.00	3/0	2/0	34	25
528C	160.00	4/0	4/0	64	25
679C	300.00	350,000 C.M.		84	5
813C	400.00	500,000 C.M.		105	5
Brass					
165B	$18.00	6	8	6	100
206B	24.00	4	5	7½	100
260B	30.00	2	3	10	100
292B	35.00	1	2	14	100
373B	48.00	2/0	1/0	21	50
418B	68.00	3/0	2/0	34	25
528B	140.00	4/0	4/0	64	25

Standard Chamfered Head Solderless Connectors

Hardware Bronze—85% Copper

Cat. No.	Per 100	A.W.G. Solid	A.W.G. Stranded	Shipping Wt. Lbs. Per 100	Std. Pkg.
165SC	$23.00	6	8	5½	100
206SC	29.00	4	5	7	100
260SC	33.00	2	3	9	100
292SC	41.00	1	2	13	100
373SC	60.00	2/0	1/0	20	50
418C	80.00	3/0	2/0	34	25
528C	160.00	4/0	4/0	64	25
679C	300.00	350,000 C.M.		84	5
813C	400.00	500,000 C.M.		105	5
Brass					
165SB	$16.00	6	8	5½	100
206SB	22.00	4	5	7	100
260SB	27.00	2	3	9	100
292SB	30.00	1	2	13	100
373SB	45.00	2/0	1/0	20	50
418B	68.00	3/0	2/0	34	25
528B	140.00	4/0	4/0	64	25

Telephone Bridging Solderless Connectors

Cat. No.	Per 100	Maximum Size and Kind of Wire	Shipping Wt. Lbs. Per 100	Std. Pkg.
104	$15.00	No. 10 AWG Copper to Copper....	2	100
104W	16.00	Same with Washer.	2	100
109	19.00	No. 12 BWG Iron to Iron............	2	100
109W	20.00	No. 12 BWG Iron to Copper..........	2	100

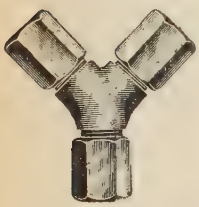
Dossert Solderless Connectors

Type A, 2-Way

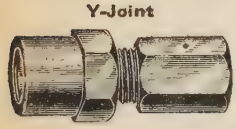
Type C, 2-Way

3-Way Joint

Elbow

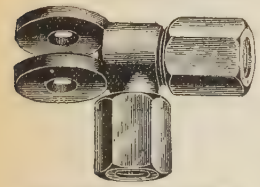


Y-Joint

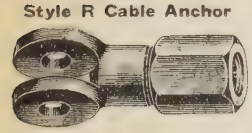


Type F Stud Connector

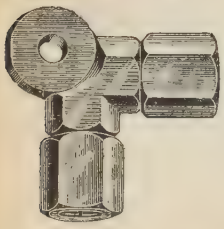
Type M Stud Connector



Style R Cable Anchor



Style S Cable Anchor



Style E Cable Anchor

Dossert Connectors eliminate the use of solder in making electrical connections. They are approved for use without solder on all classes of wiring on both solid and stranded conductors.

The Dossert joint has greater mechanical strength than a soldered joint and an electrical conductance in excess of the cable.

2-Way Connectors

Size of Conductor	Each
14–4*	$.40
3–2–1*	.50
0*	.60
00*	.75
000*	.90
0000*	1.10
250,000 CM	1.30
300,000 CM	1.50
350,000 CM	1.75
400,000 CM	2.00
450,000 CM	2.30
500,000 CM	2.60
550,000 CM	3.00
600,000 CM	3.25
650,000 CM	3.50
700,000 CM	3.75
750,000 CM	4.00
800,000 CM	4.25
850,000 CM	4.50
900,000 CM	4.75
950,000 CM	5.00
1,000,000 CM	5.00
1,250,000 CM	6.00
1,300,000 CM	6.50
1,400,000 CM	7.00
1,500,000 CM	7.00
1,750,000 CM	8.00
2,000,000 CM	9.00
2,500,000 CM	12.50
3,000,000 CM	16.00

*Specify if for solid or stranded on sizes 14 to 0000.

Reducers take the maximum 2-way list.

The 3-ways and Y's add 50 per cent to 2-way list.

The 3-ways, Y's reducers take maximum cable size price.

Elbows take same price as 2-ways. See list above.

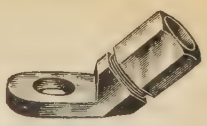
List prices of Styles F and M Stud Connectors are the same as a 2-way of corresponding size less 20 per cent, except when special large diameter or length of stud end is specified.

List prices of Style S Cable Anchor are the same as for 2-way connectors of corresponding sizes.

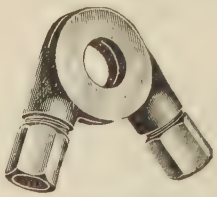
List prices of Styles R and E Cable Anchors are the same as for regular 3-way connectors of corresponding size.

Dossert Solderless Lugs

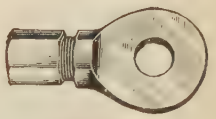
Front Lug



Angle Lug



Swivel Lug



Back Lug

Size of Conductor		1-Hole Each	2-Hole Each	4-Hole Each
14–8		$.20	$.30	....
6–4		.25	.35	....
2–1		.35	.45	....
0		.45	.55	....
00		.55	.65	....
000–0000		.75	.85	....
250–300	MCM	.95	1.05	....
350–400	MCM	1.20	1.40	....
450–500	MCM	1.45	1.65	$2.15
550–600–650	MCM	1.80	2.00	2.50
700–750–800	MCM	2.50	2.50	2.90
850–900–1000	MCM	2.90	3.20	3.50
1100–1200–1250	MCM	4.10	4.10	4.20
1300–1400–1500	MCM	5.50	5.50	5.60
1700–1750–1800	MCM	6.40	6.40	6.50
1900–2000	MCM	7.20	7.20	7.50
2500–3000	Special quotation.			

Center plate 45° and 90° lugs 20 per cent advance on list.

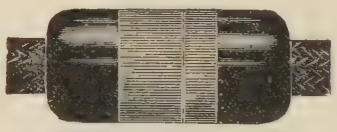
Round plates or back-connected lugs 20 per cent advance on list.

Add 20 per cent for special bolt drilling.

List prices of swivel lugs are same as for two front-connected lugs of corresponding size as given above.

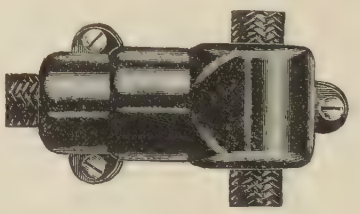
Dossert Insulating Covers

2-Way Covers



No. 4, No. 6 and Smaller Sizes	each	$.20
No. 1, No. 2, No. 3	each	.26
No. 00, No. 0	each	.46
250,000 CM, No. 0000, No. 000	each	.60
300,000 CM	each	.80
500,000 CM, 450,000 CM, 400,000 CM, 350,000 CM	each	1.00

Tap Covers



No. 1 Main and Branch	each	$.60
No. 00 Main and Branch	each	.80
No. 0000 Main and Branch	each	1.00
250,000 CM Main, No. 1 Branch	each	1.10
300,000 CM Main and Branch	each	1.30
500,000 CM Main, No. 00 Branch	each	1.70
500,000 CM Main and Branch	each	2.00

Dossert Cable Taps—Hook or Bolt Type

Size Main	Size Tap, A.W.G. 6-10 Each	4 Each	2 Each	1 Each	0 Each	00 Each	000 Each	0000 Each	Size Tap, MCM 250 300 Each	350 400 Each	450 500 Each	550 to 650 Each	700 750 Each	800 Each	850 900 Each	1000 Each
6 and Smaller	$.60	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4–2	.65	$.70	$.75	....	....	....	....	....	....	....	....	....	....	....	....	....
1, 0, 00	.70	.75	.80	$.85	$.90	$1.00	....	....	....	....	....	....	....	....	....	....
000	.80	.80	.85	.90	.95	1.05	$1.20	....	....	....	....	....	....	....	....	....
0000	.90	.90	.95	1.00	1.30	1.40	1.55	$1.65	....	....	....	....	....	....	....	....
M.C.M.																
250–300	.90	.90	1.00	1.10	1.10	1.20	1.35	1.35	$1.50	....	....	....	....	....	....	....
350–400	1.20	1.20	1.30	1.40	1.40	1.50	1.65	1.65	1.90	$2.10	....	....	....	....	....	....
450–500	1.50	1.50	1.60	1.70	1.70	1.80	1.95	1.95	2.10	2.30	$2.60	....	....	....	....	....
550–600–650	1.90	1.90	1.90	1.90	1.90	2.00	2.15	2.15	2.30	2.50	3.00	$3.40	....	....	....	....
700–750	2.20	2.20	2.20	2.20	2.20	2.30	2.45	2.45	2.60	2.80	3.20	3.60	$4.00	....	....	....
800	2.50	2.50	2.50	2.50	2.50	2.60	2.75	2.75	2.90	3.10	3.50	3.90	4.30	$4.80	....	....
850–900	3.00	3.00	3.00	3.00	3.00	3.10	3.25	3.25	3.50	3.75	4.20	4.60	5.50	5.50	$6.00	$6.60
950–1000	3.00	3.00	3.00	3.00	3.00	3.10	3.25	3.25	3.50	3.75	4.20	4.60	5.50	5.50	6.00	6.60
1200	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.60	5.80	6.00	6.30	6.70	6.70	7.80	7.80
1250–1300	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.60	5.80	6.00	6.30	6.70	6.70	7.80	7.80
1400–1500	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.15	7.35	7.55	7.85	8.25	8.25	8.70	8.70
1600–1800	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.15	8.35	8.55	8.85	9.25	9.25	9.70	9.70
1900–2000	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.35	9.55	9.75	10.00	10.45	10.45	10.90	10.90

Prices on larger sizes upon application.

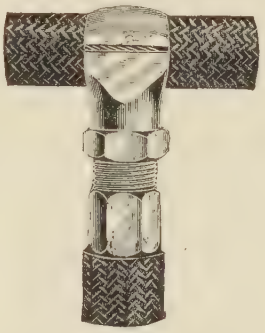
Dossert Insulated Parallel Gutter Taps

Consists of two parts only. Is insulated with fabric bakelite. It has two countersunk hardened screws of the wrench type. The screws are held in place by washers to prevent falling out.

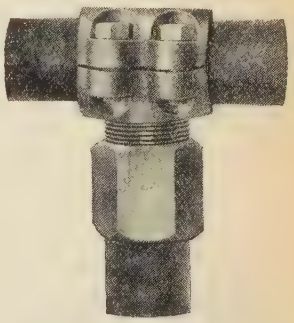
This molded insulated unit saves time required for taping or putting on loose covers with screws in the narrow gutter of a panel. It is especially adapted for making taps on live cables.

Size Main	Size Branch 6 or 4 Each	3, 2, 1 Each	0 Each	00 Each	000 Each	0000 Each
0	$1.40	$1.40	$1.40	....	....	....
00	1.40	1.40	1.40	$1.40	....	....
000	1.50	1.50	1.60	1.60	$1.60	....
0000	1.60	1.60	1.70	1.70	1.75	$1.80
250,000CM	1.65	1.70	1.70	1.75	1.95	1.95
300,000CM	1.80	1.80	1.80	1.80	2.00	2.00
350,000CM	2.00	2.00	2.00	2.00	2.10	2.10
400,000CM	2.05	2.05	2.05	2.05	2.15	2.15
450,000CM	2.30	2.30	2.30	2.30	2.40	2.40
500,000CM	2.40	2.40	2.40	2.40	2.55	2.55

Dossert Cable Taps



Hook Type



Bolt Type

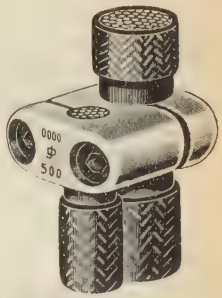
The cable tap is used to connect a branch wire, rod, or bleeder to a main wire, rod, or feeder. It does not splice the main but simply clamps onto it.

The Hook Type consists of hook, cover, jam nut, compression nut, and compression sleeve. The upper parts of cover and hook are machined to fit the main wire, while the lower end or shank is threaded, drilled, and tapered to form a nipple of a regular 2-way connector.

The Bolt Type is in the form of a split tee clamp tightened by four strong bolts. The branch connection is held by a Dossert compression sleeve and nut. The tap is made without cutting the main conductor.

Type W Dossert Parallel Gutter Taps

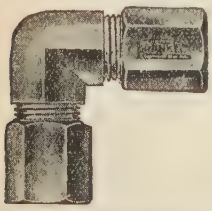
Size Main	Size Tap, A.W.G. 8, 6, or 4 Each	2 Each	1 or 0 Each	00 Each	000 Each	0000 Each	Size Tap, MCM 250 Each	300 Each	350 Each	400 Each	450 Each	500 Each	550 Each	600 Each	650 Each	700 Each
8, 6, or 4	$.60	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	.60	$.70	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1 or 0	.70	.70	$.70	....	....	....	....	....	....	....	....	....	....	....	....	....
00	.70	.70	.70	$.70	....	....	....	....	....	....	....	....	....	....	....	....
000	.70	.70	.80	.80	$.80	....	....	....	....	....	....	....	....	....	....	....
0000	.80	.80	.90	.95	.95	$1.00	....	....	....	....	....	....	....	....	....	....
C. M.																
250,000	.85	.85	.90	.90	1.05	1.05	$1.10	....	....	....	....	....	....	....	....	....
300,000	1.00	1.00	1.00	1.00	1.10	1.10	1.25	$1.25	....	....	....	....	....	....	....	....
350,000	1.10	1.10	1.10	1.10	1.20	1.20	1.40	1.40	$1.40	....	....	....	....	....	....	....
400,000	1.15	1.15	1.15	1.15	1.25	1.25	1.40	1.40	1.45	$1.45	....	....	....	....	....	....
450,000	1.40	1.40	1.40	1.40	1.50	1.50	1.70	1.70	1.80	1.80	$1.85	....	....	....	....	....
500,000	1.50	1.50	1.50	1.50	1.65	1.65	1.80	1.80	1.95	1.95	2.10	$2.10	....	....	....	....
550,000	1.75	1.75	1.75	1.75	1.85	1.85	2.00	2.00	2.10	2.10	2.30	2.30	$2.30	....	....	....
600,000	1.85	1.85	1.85	1.85	1.85	1.85	2.10	2.10	2.10	2.10	2.40	2.40	2.50	$2.50	....	....
650,000	1.85	1.85	1.85	1.85	1.85	1.85	2.10	2.10	2.10	2.10	2.40	2.40	2.50	2.50	$2.50	....
700,000	2.00	2.00	2.00	2.00	2.00	2.00	2.20	2.20	2.40	2.40	2.70	2.70	2.75	2.75	2.75	$2.80
750,000	2.00	2.00	2.00	2.00	2.15	2.15	2.30	2.30	2.40	2.40	2.80	2.80	2.85	2.85	2.85	2.95
800,000	2.20	2.20	2.20	2.20	2.30	2.30	2.40	2.40	2.50	2.50	2.90	2.90	3.10	3.10	3.10	3.10
850,000	2.20	2.20	2.20	2.20	2.30	2.30	2.40	2.40	2.50	2.50	2.90	2.90	3.10	3.10	3.10	3.10
900,000	2.40	2.40	2.40	2.40	2.40	2.40	2.60	2.60	2.70	2.70	3.00	3.00	3.10	3.10	3.10	3.40
1,000,000	2.60	2.60	2.60	2.60	2.60	2.60	2.85	2.85	2.90	2.90	3.15	3.15	3.45	3.45	3.45	3.45



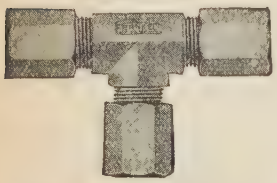
Made in all sizes up to 2,500,000 CM. Prices upon application.

Frankel Solderless Connectors

No. 2560 2-Way Connector



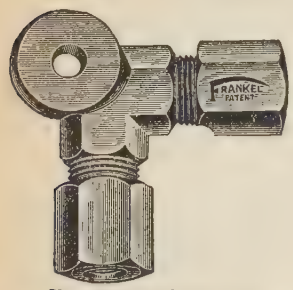
No. 2562 Elbow



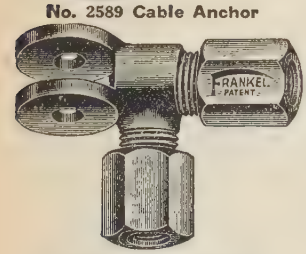
No. 2561 3-Way Connector

No. 2559 Y Connector

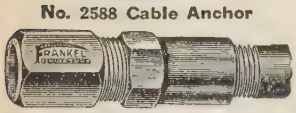
No. 2587 Cable Anchor



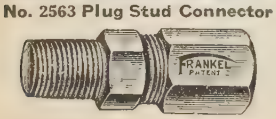
No. 2589 Cable Anchor



No. 2588 Cable Anchor



No. 2563 Plug Stud Connector



No. 2564 Stud Connector

No. 2560 2-Way Connector
To connect two wires of the same size.

No. 2586 2-Way Reducer
To connect wires of different sizes.

No. 2562 Elbow
To splice two cables, wires, rods, or tubes that meet at right angles. Conductors may be same or different size.

No. 2561 3-Way Connector
To splice a main cable or two different size cables and make tap at point of splice. Any combination of sizes.

No. 2559 Y Connector
A 3-way splice to connect any combination of 3 wires.

No. 2587 Cable Anchor
To connect and anchor end of cable to strain insulator.

No. 2589 Cable Anchor
To splice and anchor two cables at right angles.

No. 2588 Cable Anchor
To anchor one cable and to take a branch wire off the anchored cable.

No. 2563 Plug Stud Connector
To connect wire or cable to a threaded stud or rod.

No. 2564 Stud Connector
To connect wire or cable to block terminals by screwing stud end of connector into a threaded hole, or to strap terminals by inserting stud end through a hole in strap and clamping by a nut on end of stud.

Size Wire or Cable	Nos. 2560 2586,2562 and 2587 Each	Nos. 2561 2559,2589 and 2588 Each
16 to 4*	$.40	$.60
2 to 1*	.50	.75
0*	.60	.90
00*	.75	1.13
000*	.90	1.35
0000*	1.10	1.65
250,000CM	1.30	1.95
300,000CM	1.50	2.25
350,000CM	1.75	2.63
400,000CM	2.00	3.00
500,000CM	2.60	3.90
600,000CM	3.25	4.88
700,000CM	3.75	5.63
750,000CM	4.00	6.00
800,000CM	4.25	6.38
1,000,000CM	5.00	7.50
1,250,000CM	6.00	9.00
1,300,000CM	6.50	9.75
1,500,000CM	7.00	10.50
1,750,000CM	8.00	12.00
2,000,000CM	9.00	13.50

*Specify solid or stranded.

Where the wires joined are of different sizes, use list price of largest size.

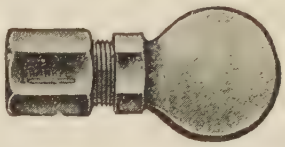
If plug or stud connector is no larger in diam. than diam. of wire, use 2-way price less 20%. If larger, refer to 2-way prices, take ½ wire price plus ½ wire price next larger than plug or stud, less 20%.

Frankel Solderless Lugs

No. 2568 Front Lug

Connects cable to bus bars or plate.

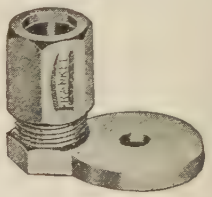
No. 2569 Back Lug



Connects cable to stud.

No. 2570 Angle Lug

No. 2572 Right Angle Lug



Connects cable to stud. Made with rectangular plates for cable to bus.

No. 2574 Swivel Lug

An adjustable angle connector to splice two or three cables of the same or different sizes.

Wire and Cable Size	No. *2568, Front Lug — For 1-Hole Each	For 2-Hole Each	For 4-Hole Each	No. 2569 No. 2570 No. 2572 No. 2574 Each
16 to 8	$.20	$.30	....	$.24
6 to 4	.25	.35	....	.30
2 to 1	.35	.45	....	.42
0	.45	.45	....	.54
00	.55	.65	....	.66
000–0000	.75	.85	....	.90
CM				
250,000–300,000	.95	1.05	....	1.14
350,000–400,000	1.20	1.40	....	1.44
500,000	1.45	1.65	$2.15	1.74
600,000	1.80	2.00	2.50	2.16
700,000–800,000	2.50	2.50	2.90	3.00
900,000–1,000,000	2 90	3.20	3.20	3.48
1,250,000–1,300,000	4.10	4.10	4.20	4.92
1,500,000	5.50	5.50	5.60	6.60
1,750,000	6.40	6.40	6.40	7.68
2,000,000	7.40	7.40	7.40	8.88

*When drilling is not specified, undrilled lugs with plate sizes for one hole will be furnished. For special drillings, add 20 per cent.

Frankel Solderless Cable Taps

No. 2575 Hook Cable Tap

To tap current from a continuous run of feeder cable.

Main and branch may be any combination of sizes. Also rod to rod, tube to tube, and rod or tube to cable.

No. 2602 Bolted Cable Tap

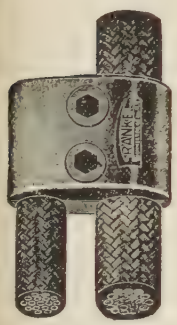
A heavy duty tap with Everdur Bolts.

To tap a current from a continuous run of feeder cable.

May be any combination of wire, cables, rod, or tube.

Size of Branch Wire or Cable	Size Main Cable, A.W.G. 6 & Smaller Each	4-2 Each	1-0 00 Each	000 0000 Each	Size Main Cable, MCM 250 300 Each	350 400 Each	450 500 Each	550 600 Each	650 700 Each	750 800 Each	900 1000 Each	1250 1300 Each	1400 1500 Each	1600 1750 Each	1800 2000 Each
6 and Smaller	$.60	$.65	$.70	$.80	$.90	$1.20	$1.50	$1.90	$2.20	$2.50	$3.00	$5.45	$7.00	$8.00	$9.20
4	....	.70	.75	.80	.90	1.20	1.50	1.90	2.20	2.50	3.00	5.45	7.00	8.00	9.20
2	....	.75	.80	.85	1.00	1.30	1.60	1.90	2.20	2.50	3.00	5.45	7.00	8.00	9.20
1	....	....	.85	.90	1.10	1.40	1.70	1.90	2.20	2.50	3.00	5.45	7.00	8.00	9.20
0	....	....	.90	.95	1.10	1.40	1.70	1.90	2.20	2.50	3.00	5.45	7.00	8.00	9.20
00	....	....	1.00	1.05	1.20	1.50	1.80	2.00	2.30	2.60	3.10	5.45	7.00	8.00	9.20
000–0000	....	....	....	1.20	1.35	1.65	1.95	2.15	2.45	2.75	3.25	5.45	7.00	8.00	9.20
CM															
250,000–300,000	....	....	....	....	1.50	1.90	2.10	2.30	2.60	2.90	3.50	5.60	7.15	8.15	9.35
350,000–400,000	....	....	....	....	....	2.10	2.30	2.50	2.80	3.10	3.75	5.80	7.35	8.35	9.55
500,000	....	....	....	....	....	....	2.60	3.00	3.20	3.50	4.20	6.00	7.55	8.55	9.75
600,000	....	....	....	....	....	....	....	3.40	3.60	3.90	4.60	6.30	7.85	8.85	10.00
650,000–700,000	....	....	....	....	....	....	....	....	4.00	4.30	5.50	6.70	8.25	9.25	10.45
750,000–800,000	....	....	....	....	....	....	....	....	....	4.80	5.50	6.70	8.25	9.25	10.45
850,000–900,000	....	....	....	....	....	....	....	....	....	....	6.00	7.60	8.70	9.70	10.90
1,000,000	....	....	....	....	....	....	....	....	....	....	6.60	7.60	8.70	9.70	10.90
1,250,000–1,300,000	....	....	....	....	....	....	....	....	....	....	....	8.10	9.45	10.20	11.40
1,400,000–1,500,000	....	....	....	....	....	....	....	....	....	....	....	....	10.00	11.00	12.35
1,600,000–1,750,000	....	....	....	....	....	....	....	....	....	....	....	....	.....	11.60	12.80
1,900,000–2,000,000	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....	13.50

No. 2601 Parallel Panel Gutter Tap

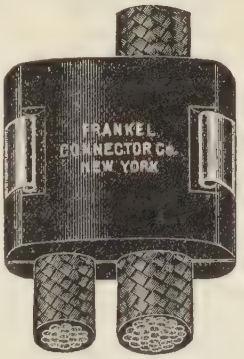


A simple parallel tap to branch from a continuous feeder to a tap.

Small enough to easily fit in the gutter of a distribution panel.

May easily be taped or covered with a bakelite cover.

No. 2603 Insulating Cover for Panel Gutter Tap



Two heavy bakelite halves which closely fit over panel gutter tap and the insulation of the wires. Is held in place with a heavy cadmium-plated steel spring.

Size Branch	Size Main Cable 0-00 Each	000-0000 Each	250 300 MCM Each	350 600 MCM Each
8 to 00	$.70	$.80	$.80	$.90
000–0000	...	.80	.90	.90
250,000	...	....	.90	.90
300,000	...	...	.90	.90

Size of Branch Wire or Cable	Size Main Cable, A.W.G. 2 & Smaller Each	1-0 00 Each	000 Each	0000 Each	Size Main Cable, MCM 250 Each	300 Each	350 Each	400 Each	500 Each	600 Each	700 Each	750 Each	800 Each	900 Each	1000 Each
3 and Smaller	$.60	$.70	$.70	$.80	$.85	$1.00	$1.10	$1.15	$1.50	$1.85	$2.00	$2.00	$2.20	$2.40	$2.60
2	.70	.70	.70	.80	.85	1.00	1.10	1.15	1.50	1.85	2.00	2.00	2.20	2.40	2.60
1	....	.70	.70	.80	.90	1.00	1.10	1.15	1.50	1.85	2.00	2.00	2.20	2.40	2.60
0	....	.70	.80	.90	.90	1.00	1.10	1.15	1.50	1.85	2.00	2.00	2.20	2.40	2.60
00	....	.70	.80	.95	.95	1.00	1.10	1.15	1.50	1.85	2.00	2.00	2.20	2.40	2.60
000	....	....	.80	.95	1.05	1.10	1.20	1.25	1.65	1.85	2.00	2.15	2.30	2.40	2.60
0000	....	....	....	1.00	1.05	1.10	1.20	1.25	1.65	1.85	2.00	2.15	2.30	2.40	2.60
CM															
250,000–300,000	....	....	....	....	1.10	1.25	1.40	1.40	1.80	2.10	2.20	2.30	2.40	2.60	2.85
350,000–400,000	....	....	....	....	....	....	1.40	1.45	1.95	2.10	2.40	2.40	2.50	2.70	2.90
450,000–500,000	....	....	....	....	....	....	....	....	2.10	2.40	2.70	2.80	2.90	3.00	3.15
600,000–650,000	....	....	....	....	....	....	....	....	....	2.50	2.75	2.85	3.10	3.10	3.45
700,000–750,000	....	....	....	....	....	....	....	....	....	....	2.80	2.95	3.10	3.40	3.45
800,000–850,000	....	....	....	....	....	....	....	....	....	....	....	....	3.25	3.70	3.80
900,000–1,000,000	....	....	....	....	....	....	....	....	....	....	....	....	....	3.70	3.80

Ideal Universal Wire Connectors

Solderless—Tapeless

Ideal Connectors replace, at a big saving, solder and tape, plug connections, terminal blocks, binding posts, etc. They are intended for all roughing-in joints, fixture hanging, connections in appliances, fixtures, tools, signs, radios, etc.

Approved by Underwriters' and Factory Mutual Laboratories. Recommended by National Electrical Code.

Making a joint with an Ideal Connector is just like screwing a nut on a bolt. The connector simply screws on giving a positive and permanent contact. Spiral metal insert (copper coated), which acts as a current carrying sleeve, presses threads into the wires and binds them together in a vise-like grip—assuring a doubly secure joint.

No. 72 Fixture-Appliance Universal Type

A small connector for fixture wiring, joints in shallow canopies and appliances. Particularly adapted for Nos. 18 or 20 wires, either solid or stranded.

No.	Description	Per 100	Per 1000
72	For 2 No. 20 to 3 No. 18 Solid or Stranded Wire	$2.45	$20.00

No. 74 Standard Universal Type

Fits all common wiring joints.

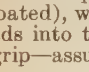
No.	Description	Per 100	Per 1000
74	For 1 No. 14 Solid and 1 No. 18 Stranded to 4 No. 14 or 2 No. 12 Wires, Solid or Stranded	$3.85	$35.00

No. 76 Large Universal Type

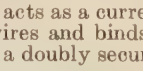
For use in the industrial field and where larger gauge wires are used, or where a large number of small wires are to be joined in a junction box.

No.	Description	Per 100	Per 1000
76	For 4 No. 14 to 3 No. 10 Solid or Stranded Wire	$4.35	$39.35

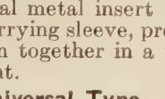
Bryant Solderless Wire Connectors



No. 767



No. 768



No. 769 Showing Coil Spring Insert

Moulded composition with spiral coiled wire insert.

No. 767 is for making connections to fixtures. No. 768 is for combinations of Nos. 12, 14, 16 and 18 wires to a maximum of two No. 12, or four No. 14. No. 769 is large size, for connecting wires up to three No. 10.

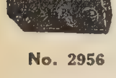
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
767	$2.50	Up to 3 No. 18 Wires	100	1000	5
768	4.50	Up to 4 No. 14 Wires	100	1000	19
769	5.10	Up to 3 No. 10 Wires	100	1000	33

Bryant Templus Flat Cord Connectors

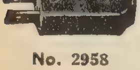
10 Amperes, 125 Volts; 5 Amperes, 250 Volts

These devices do not have standard prong spacings.

Have 9/32-inch cord hole.



No. 2956



No. 2958

No. 2956 Receptacle Portion

For use with No. 2958 only.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2956	$31.82	10	100	5

No. 2958 Plug Portion

For use with No. 2956 only.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2958	$31.82	10	100	5

Universal Test Clips and Insulators

No. 24 Clip Only

No. 45 Clip with No. 47 Insulator

Test clips save time in electrical work requiring quick temporary connections. May be used over and over again.

Rubber insulators are a convenient protection against electric shock and prevent clips from shorting on each other. Furnished half red and half black to indicate polarity.

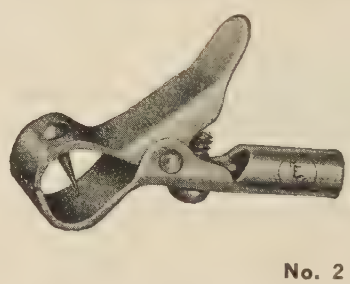
Packed 10 to a box and 10 boxes to a carton.

Screw Connection

No.	Description	Spread of Jaws In.	Wt., Lbs. per 100	Each
45	5-Amp. Pee Wee Clip Only, Cadmium.	7/16	1½	$.05
47	Rubber Insulator for No. 45 Clip	...	1¾	.06½
48-B	10-Amp. Clip Only, Cadmium Plated.	9/16	2	.05
49	Rubber Insulator for No. 48-B Clip	...	4	.10
27	10-Amp. Clip Only, Cadmium Plated.	9/16	3	.12½
29	Rubber Insulator for No. 27 Clip	...	5	.10
24-A	25-Amp. Clip Only, Lead Plated	1	5	.10
24	25-Amp. Clip Only, Solid Copper	1	5½	.20
26	Rubber Insulator for No. 24 or 24-A Clip	...	9	.20
21-A	50-Amp. Clip Only, Lead Coated	1¼	15	.20
	Lug Connection			
21	50-Amp. Clip Only, Solid Copper	1¼	19	$.60
23	Rubber Insulator for No. 21 or 21-A Clip	...	11	.33
11-A	100-Amp. Clip Only, Lead Coated	1¼	33	.50
11	100-Amp. Clip Only, Solid Copper	1¼	36	.85
13	Rubber Insulator for No. 11 or 11-A Clip	...	27	.58
33	200-Amp. Clip Only, Solid Copper	2	57	1.35
35	Rubber Insulator for No. 33 Clip	...	30	.70

Reliable Testing Clips

For temporary connections to insulated wires. Made of heavy nickel silver with hard sharp insulation puncturing points and perfectly registering teeth.



No. 1

Fitted with screw, nut and washer for attaching to instrument cord.

No. 1......each **$.30**

No. 2

Same as No. 1 but with screw, nut and washer omitted. Preferred where connection to cord is to be soldered.

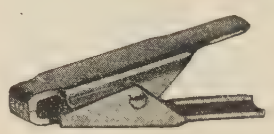
No. 2......each **$.30**

No. 3

Same as No. 1 but without the spike.

No. 3......each **$.30**

No. 5



A light, sturdy clip with a strong spring. Convenient for temporary connections in radio, telephone and signal work.

Particularly good for congested telephone equipment.

Plenty of room for soldering flat cord terminals.

No. 5......each **$.24**

Fahnestock Binding Posts

No. 3

Will take No. 10 B. & S. Wire. Length over all, 1 1/16 inches. Width, 3/8 inch. Screw hole for No. 8 screw.

Price, No. 3, Brass.....each $.05
Price, No. 3, Bronze.....each .06
Price, No. 3, Nickeled Brass.....each .05
Price, No. 3, Nickeled Bronze.....each .06

No. 5

Will take No. 10 B. & S. Wire. Has projecting lug to which can be soldered a wire. Length over all, not including soldering lug, 1 1/16 inches. Width, 3/8 inch. Screw hole for No. 8 screw.

Price, No. 5, Brass.....each $.07
Price, No. 5, Bronze.....each .08
Price, No. 5, Nickeled Brass.....each .07
Price, No. 5, Nickeled Bronze.....each .08

No. 9

Will take No. 10 B. & S. Wire. Length over all, 2 1/16 inches. Width, 3/8 inch. Screw hole for No. 8 screw.

Price, No. 9, Brass.....each $.08
Price, No. 9, Bronze.....each .10
Price, No. 9, Nickeled Brass.each .08
Price, No. 9, Nickeled Bronze.each .10

No. 24

Will take No. 10 B. & S. Wire. Length over all, 1 7/16 inches. Width, 3/8 inch. Made with either 1/4 or 5/16-inch screw hole.

Price, No. 24, Brass.....each $.08
Price, No. 24, Bronze.....each .10
Price, No. 24, Nickeled Brass....each .08
Price, No. 24, Nickeled Bronze...each .10

Fahnestock Test Connectors

No. 30

Made of special copper bronze spring metal. Two large clips riveted together. Both snap over the line. Made for different size wire. Used for test poles or for party line work. Length over all, 1 5/16 inches. Width, 5/8 inch.

In ordering, state kind and size of wires to be connected.

Price, No. 30, Bronze.....each $.15

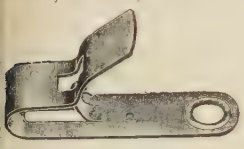
No. 31

One large and one small clip riveted together. Large clip snaps over the line wire. The small clip does not snap over, and will take up to and including No. 10 B. & S. Used for attaching drop or jumper wires to line on junction poles or party lines. Length over all, 1 5/16 inches. Width, 5/8 inch.

In ordering, state kind and size of wires to be connected.

Price, No. 31, Bronze.....each $.10

No. 33

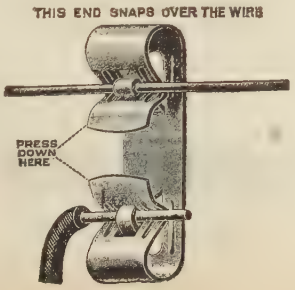


Temporary connector for emergency work and test sets.

Will snap over a No. 8 B. W. G. Wire.

Price, No. 33, Bronze...each $.15

No. 34



One end snaps over the line. Made in only one size. Snaps over a No. 12 B. W. G. Wire.

Other end does not snap over wire but will take any size wire up to No. 9 B. W. G.

Length over all, 2 3/4 inches. Width, 5/8 inch.

Price, No. 34, Bronze .....each $.10

National Double Tube Connectors

These sleeves are manufactured accurately to size from the best grade of pure copper. Each detail of operation has been carefully planned, and a rigid factory inspection weeds out any possible defective material.

When twisted, National Sleeves are drawn so tightly around the conductors as to form practically a welded joint.

Thus the danger of corrosion, due to air and moisture, is entirely eliminated; and instead of building up a high resistance, as is true of the average hand splice, a joint of this type has a ratio of conductivity with the conductor of better than two to one.

National Double Tube Copper Sleeves for Stranded Cable

Cat. No.	Gauge No.	Diam. Wire Inches	Length Inches	Wt., Lbs. per 1000
200	0000 B&S	.530	20	1570
201	000 B&S	.470	20	1400
202	00 B&S	.420	18	1025
203	0 B&S	.375	16	675
204	1 B&S	.330	14	550
205	2 B&S	.291	12	350
206	3 B&S	.261	9 1/2	250
207	4 B&S	.231	8 3/4	190

National Double Tube Copper Sleeves for Solid Wire

210	0000 B&S	.460	20	1400
211	000 B&S	.410	18	1025
212	00 B&S	.365	16	675
213	0 B&S	.325	14	550
214	1 B&S	.289	12	350
215	2 B&S	.258	9 1/2	250
216	3 B&S	.229	8 3/4	190
217	4 B&S	.204	6	130
218	4 B&S	.204	8	160
219	5 B&S	.182	6	115
220	6 B&S	.162	6	100
221	7 B&S	.144	5 3/4	85
222	8 B&S	.128	5 1/2	60
223	8 BWG	.165	6	100
224	9 B&S	.114	5 1/4	50
225	9 BWG	.148	5 3/4	85
226	10 B&S	.102	4 3/4	30
227	10 BWG	.134	5 1/2	60
228	11 BWG	.120	5 1/4	50
229	12 B&S	.081	4 1/2	23
230	12 BWG	.109	4 3/4	35
231	12 NBS	.104	4 3/4	30
232	14 B&S	.064	4	20
233	14 BWG	.083	4 1/2	23
234	14 NBS	.080	4 1/2	23
235	16 B&S	.051	4	18
236	16 BWG	.065	4	20
237	17 B&S	.045	4	15
238	18 B&S	.040	4	14

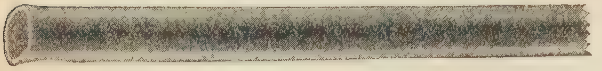
National Double Tube Tinned Copper Sleeves

240	8 BWG	.165	6 3/4	110
241	9 BWG	.148	5 3/4	90
242	10 BWG	.134	5 1/2	65
243	12 BWG	.109	4 3/4	40
244	14 BWG	.083	4 1/2	30
245	16 BWG	.065	4	25

National Double Tube Tinned Steel Sleeves

250	8 BWG	.165	6 3/4	90
251	9 BWG	.148	5 3/4	60
252	10 BWG	.134	5 1/2	55
253	12 BWG	.109	4 3/4	35
254	14 BWG	.083	4 1/2	30
255	16 BWG	.065	4	25

National Seamless Single Tube Copper Sleeves



Made accurately to size from high grade electrolytic copper and furnished in a temper that permits of easy twisting. A large stock is maintained at all times and orders will be filled promptly.

For Solid Copper Wires

Cat. No.	Wire Size B. & S. Gauge	Decimal Equivalent	Length Sleeve Inches	Weight Pounds per 100
450	6	.162	6	10
451	5	.182	6¾	13¾
452	4	.204	7½	16
453	3	.229	8½	19
454	2	.259	9¾	25
455	1	.289	11	33½
456	0	.325	12½	55
457	00	.365	14	67½
458	0000	.410	16	102
459	00000	.460	18	140

For Standard Stranded Copper Cables

Cat. No.	Cable Size B. & S. Gauge	Decimal Equivalent	Length Sleeve Inches	Weight Pounds per 100
460	4	.231	8½	19
461	3	.260	9¾	25
462	2	.292	11	33½
463	1	.328	12½	55
464	0	.368	14	67½
465	00	.414	16	102
466	000	.465	18	140
467	0000	.522	19½	151
468	250,000 C M	.575	21	180
469	300,000 C M	.621	21¾	220
470	500,000 C M	.853	24	320

Prices upon application.

National Tinned Copper Cable Sleeves

For Straight Splices

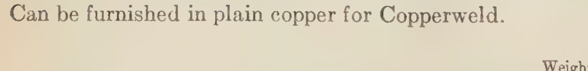
It is not desirable to splice large gauge telephone cable, pilot wires, signal wires and station control cable by hand as the joint would be too bulky. This sleeve makes a neat, compact and mechanically correct joint.

Cat. No.	Size A.W.G.	Diameter Wire Inches	Length Inches	Weight Pounds per 100
259	9	.114	1½	5
260	10	.102	1½	5
260A	12	.080	1½	4
161	13	.072	1½	4
262	14	.064	1½	4
262A	15	.058	1½	3
263	16	.051	1½	3

Prices upon application.

National Tinned Copper Sleeves

For Galvanized Ground Wire



Can be furnished in plain copper for Copperweld.

Cat. No.	Size Inches	Length Inches	Weight Pounds per 100
474	¼	12	50
475	9/32	14	60
476	5/16	16	90
477	⅜	20	120
478	7/16	24	190
479	½	26	210

Diamond Bridle Rings

Galvanized and Enameled

For pole line and interior block distribution.

Furnished either Diamond galvanized by the hot process or enameled. All enameled rings, unless otherwise specified, are furnished in dark blue.

Style	Eye Inches	Opening Inches	Shank Inches	Steel Inches	Weight Pounds Per 1000 Galvanized	Weight Pounds Per 1000 Enameled
A	1⅝	5/16	1¼	¼	115	150
C	1¼	5/16	1¼	¼	95	125
E	⅝	5/16	⅞	3/16	35	50
F	3	5/16	1⅞	5/16	300	335

Prices upon application.

Diamond Drive Rings

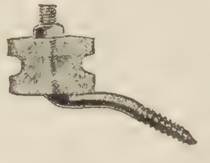
Designed to accomplish the same purpose as the screw bridle ring; can be used in stucco exterior walls and plaster interior walls over wood, where it is difficult to secure a wood screw bridle ring. Quickly attached with an ordinary nail hammer. Made of hard nail wire Diamond galvanized by the hot process.

Diameter of Eye.................inches	½	1¼
Per 1000............................	**$11.00**	**25.00**
Wire Gauge No........................	11	9
Length.......................inches	2	3

Diamond Angle Screws

Diamond Intergalvanized

For attaching knobs for drop wiring on wood or stone structures.



Size.............inches	5/16	⅜
*Per 100.............	**$5.50**	**9.00**
Diameter Wire...inches	5/16	⅜
Lgth. Screw End.inches	2¼	2
Length Shank....inches	2¼	3½
Weight per 100..pounds	12	20

*Price does not include insulators.

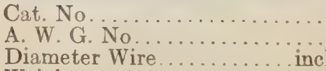
Diamond Bridle Wire Insulators

For insuring a dry connection between a bare wire and an insulated wire tapped therefrom. Where a dry connection is necessary to prevent leakage over and around the insulation the wire insulator is used. The braid and rubber portion is stripped from the bare wire which is passed through the messenger-proof cup and soldered to prevent messenger following the bare wire into the protected glass petticoat.

It is used on loading coils in telephone construction and for lead-in wires on telegraph strands.

Price.................................per 100 **$100.00**

Type D National Tinned Copper Cable Sleeves



Length, 1½ inches.

Cat. No........................	**265**	**266**	**267**	**268**
A. W. G. No....................	10	13	14	16
Diameter Wire............inches	.102	.072	.064	.051
Weight per 1000..........pounds	7½	6	6	5

Diamond Combination Cable Clamps

With Detachable Bridle Rings

Provides an economical and quickly applied fastening for attaching lead covered cables and parallel runs of bridle wire to walls built of any material.

Without Bridle Rings or Screw Anchors

No.	Per 100	Size Clamp, In. Diam. Cable	Diam. Conduit or Pipe	Diam. Wood Screw and Length	Size of Screw Anchor	Wt., Lbs. per 100
0A	$5.00	9/16	1/4	14x1 1/4"	10-14x1"	3 1/2
0	5.20	11/16	3/8	14x1 1/4"	10-14x1"	4
1	6.45	13/16	1/2	14x1 1/4"	10-14x1"	4 1/2
2A	9.30	1	3/4	14x1 1/4"	10-14x1"	7
2	9.70	1 3/16	...	14x1 1/4"	10-14x1"	7 1/2
3A	14.00	1 3/8	1	14x1 3/4"	10-14x1 1/2"	14 1/2
3	15.00	1 9/16	1 1/4	14x1 3/4"	10-14x1 1/2"	15 1/2
4A	16.90	1 7/8	1 1/2	14x1 3/4"	10-14x1 1/2"	18 1/2
4	18.75	2 3/16	2	14x1 3/4"	10-14x1 1/2"	20
5	19.75	2 5/8	2 1/2	14x1 3/4"	10-14x1 1/2"	24

Small Sizes without Bridle Ring Attachment

No.	Cable Size or O.D. of Conduit In.	Per 100	Conduit or Pipe Size Normal I.D., In.	Diam. Wood Screw and Length	Size of Screw Anchor	Wt., Lbs. per 100
O-G	3/16	$1.40	..	8x1"	6-8x3/4"	1.0
O-G	1/4	1.87	..	8x1"	6-8x3/4"	1.0
O-G	5/16	1.87	..	8x1"	6-8x3/4"	1.0
5-0	3/8	1.87	..	8x1"	6-8x3/4"	1.0
4-0	7/16	2.13	1/8	8x1"	6-8x3/4"	1.1
3-0	1/2	2.25	..	8x1"	6-8x3/4"	1.2
2-0	5/8	2.37	..	8x1"	6-8x3/4"	1.3

Rings

One size of ring fits all sizes of clamps.
Diameter of eye, 1 inch. Per 100..... $2.75

Blake Insulated Staples

No. 1 No. 3 No. 5 No. 6

Illustrations Are Actual Size

Blake Insulated Staples are packed in various ways to meet the demands of electricians, dealers, radio stores, etc.

No. C-40 staples are furnished in white, buff, green, maroon and brown.

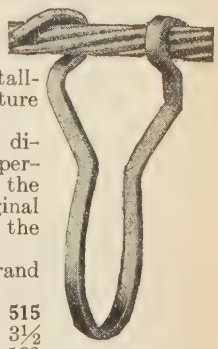
No. R-100 packed 100 in a box; No. D-50 packed 50 in a box; No. C-40 packed 40 in a box.

Display carton of 1000 staples (25 boxes of 40) is supplied either with staples in solid colors or with assortment consisting of 5 boxes of each color.

Size No.	No. R-100 per Carton of 1000	No. D-50 per Carton of 1000	No. C-40 (Colored) per Carton of 1000	Approx. Ship. Wt. Lbs. Case of 10000	Case of 25000
1	$2.80	$3.10	....	16	41
2	....	....	$3.30	..	..
3	2.80	3.10	....	21	51
5	2.80	....	3.30	23	55
6	3.00	....	....	25	60
7	3.00	....	....	27	67

GraybaR QUALITY Since 1869 — Distributed and guaranteed by GraybaR ELECTRIC COMPANY

National Cable Rings



National Rings are easily and quickly placed on the strand and once in position are rigidly immovable. The ease with which these rings can be installed is an important factor. Another feature is the ample space for reclipping.

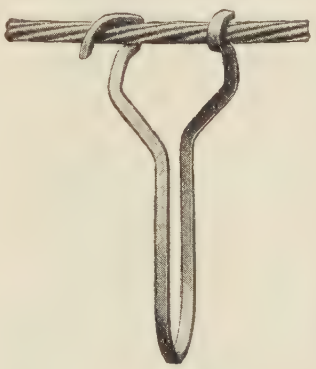
Cable can be pulled in from either direction, and neither the strain of this operation, nor the swaying of the cable by the wind, can move the ring from its original position, for the greater the strain, the tighter the grip.

Hot dip galvanized; made in all strand sizes. No. 511 is light; No. 512 heavy.

No.	510	511	512	513	514	515
Size ....inches	1 1/2	2	2	2 1/2	3	3 1/2
Wt. per 1000 lbs.	50	57	80	98	123	132

Prices upon application.

National Extra Long Cable Rings



For placing a second cable on an existing messenger.

When this cable ring is used, service interruption and expense in time, labor and materials is eliminated.

Made in all strand sizes; specify size desired.

Cat. No.	Size In.	Lgth. In.	Wt., Lbs. per 1000
520	1 1/2	4 3/4	110
521	2	5 1/4	155
522	2 1/2	6 3/4	200
523	3	7 1/2	230
524	3 1/2	8	250

National Marline Cable Hangers

No. 3 A. T. & T. Specifications

The hooks are made of No. 9 spring steel wire and are regalvanized by hot dip process after they are formed.

The loop is three-ply houseline in the lengths indicated.

Lgth. of Loop, In.	Size of Cable, Pair	Wt., Lbs. per 1000	Price per 1000
9	25	35	$17.00
11	50	37	19.00
12	75	38	20.00
14	100	40	22.00
15	150	42	24.00
16	200	45	25.00

No. 6 regalvanized hooks furnished on this grade at a net advance of $1.50 per 1000.

Marline

Furnished in one-pound balls in both the 2 and 3-ply varieties.

Cat. No.	Grade	Price per Lb.
415	2-ply	$.35
416	3 "	.35

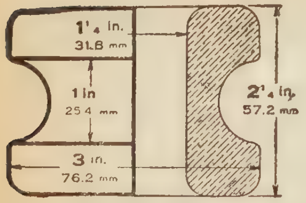
National Galvanized Cable Ring Saddles

Eliminates ring cutting on lead sheath due to vibration and assures a longer life to the cable.

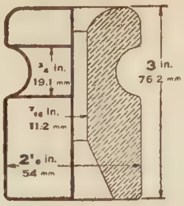
Cat. No..	530	531	532	533	534
Size...in.	1 1/2	2	2 1/2	3	3 1/2
Wt. lbs. per 1000	90	100	180	220	245

Thomas Porcelain Insulators

No. 0

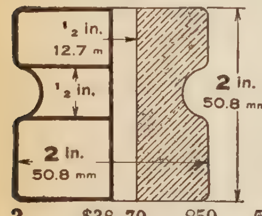


No. 1

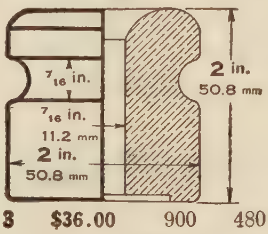


Cat. No.	Per 1000	No. in Barrel	Packed Wt., Lbs. per 1000
0	$102.70	350	1000
1	$56.30	600	725

No. 2

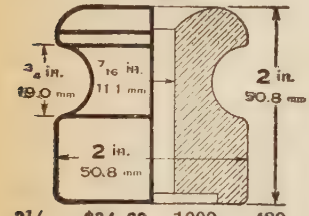


No. 3

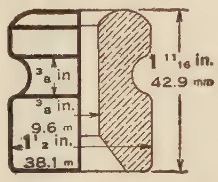


Cat. No.	Per 1000	No. in Barrel	Packed Wt., Lbs. per 1000
2	$38.70	850	500
3	$36.00	900	480

No. 3½

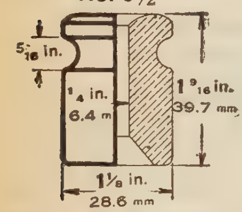


No. 4

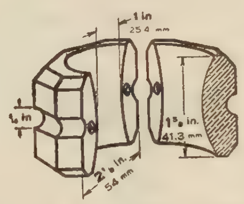


Cat. No.	Per 1000	No. in Barrel	Packed Wt., Lbs. per 1000
3½	$34.60	1000	430
4	$15.20	2000	230

No. 5½



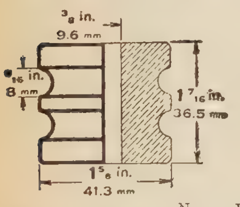
No. 22 Split Knob



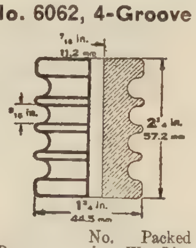
Cat. No.	Per 1000	No. in Barrel	Packed Wt., Lbs. per 1000
5½	$9.60	3500	120
22	$42.30	1000	332

Thomas Solid Porcelain Telephone Knobs

No. 6061, 2-Groove

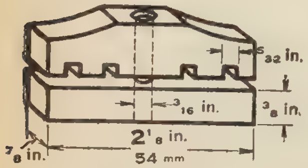


No. 6062, 4-Groove

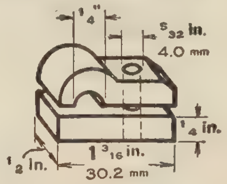


Cat. No.	Per 1000	No. in Barrel	Packed Wt., Lbs. per 1000
6061	$26.60	2000	210
6062	$39.70	1000	395

Thomas Porcelain Telephone Cleats



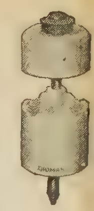
No. 314 Top
No. 315 Base



No. 333 Top
No. 333½ Base

314	......	3000	115
315	......	3000	130
333	.....	21000	26
333½	.....	22000	22

Nail Assembled Knobs



Consists of cap, base, 10d nail and nail head assembled. Has two grooves and will take wire sizes 12 to 14.

Cat. No.	Diam. Inches	Height Inches	Std. Pkg.	Wt., Lbs. per 1000	Price per 1000
5½ Split	1 3/16	1¾	2600	160	$70.00

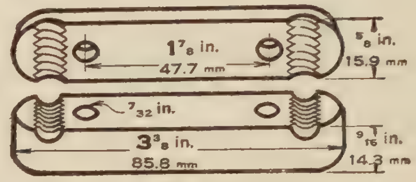
Screw-It Split Knobs

Consists of base, cap and 3-inch screw assembled. No. 5½ Split and Detroit have 2 grooves, and take wire sizes 12 to 14. Nos. 9419 and 9420, 4 grooves, take wire sizes 8 to 10 and 4 to 6 respectively.

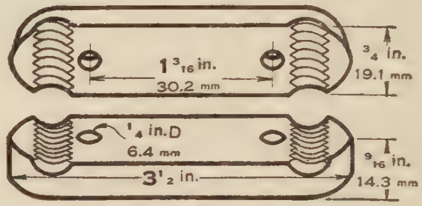
Cat. No.	Diameter Inches	Height Inches	No. in Barrel	Wt., Lbs. per 1000	Price per 1000
5½ Split	1 3/16	1¾	3200	135	$90.00
Detroit	1¼	1¾	2800	160	100.00
9419 Type	1½	1⅞	1500	287	150.00
9420 Type	1 15/16	2⅛	750	600	225.00

2 and 3-Wire Cleats

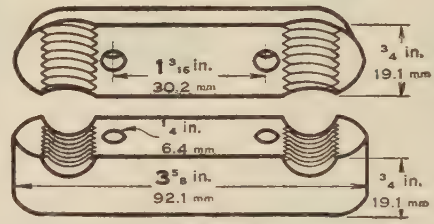
Standard Cleats



No. 334



No. 335



No. 350

Any of the sizes listed below can be furnished for either 2 or 3 wires; 2-wire cleats will always be furnished unless 3-wire are specified.

For prices on 3-wire cleats add 10 per cent to 2-wire prices, listed below.

Wire Size No.	No. in Bbl.	Unglazed Cat. No.	Unglazed Wt., Lbs. per 1000	Unglazed Price per 1000	White Glazed Cat. No.	White Glazed Wt., Lbs. per 1000	White Glazed Price per 1000
12–14	*1850	334-UG	200	$17.60	334-G	200	$33.10
9–10	1500	335-UG	288	21.90	335-G	288	39.10
2–6	1250	350-UG	333	27.90	350-G	333	55.00

Mill Type Cleats

These are exactly the same as those listed above excepting that cleats with a heavy 1-inch base are furnished.

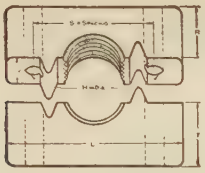
For construction in damp places or where cleats are attached to metal supports as in mills, foundries, etc.

12–14	1400	334½-UG	340	$25.80	334½-G	350	$41.30
8–10	1100	335½-UG	540	30.80	335½-G	540	46.90
2–6	850	350½-UG	453	36.90	350½-G	453	60.30

*Can also be furnished packed in paper cartons. Each carton contains 100 cleats, and 10 cartons are packed to a case. The price for cleats packed this way is: No. 334-UG, $20.70 per case; No. 334-G, $36.20 per case.

Standard B & D 1-Wire Cleats

White Glaze



Light Cap and Light Base

Cat. No.	Wire Size	Dimensions, Inches H	L	S	W	No. in Bbl.	Wt. Lbs. per Bbl.	Price per 1000
110	14 to 6	1/4	1 7/8	1 1/8	7/8	2000	430	$45.80
111	6 to 2	5/16	2 1/4	1 3/8	1	1600	465	55.50
112	2 to 0	5/16	2 5/8	1 11/16	1 1/8	1250	455	63.40
113	0 to 000	3/8	3	1 15/16	1 1/4	700	440	86.50
114	000 to 200000 CM	3/8	3 3/8	2 1/4	1 3/8	500	430	106.70

Light Cap and Heavy Base

115	14 to 6	1/4	1 7/8	1 1/8	7/8	1600	410	$49.00
116	6 to 2	5/16	2 1/4	1 3/8	1	1250	455	62.40
117	2 to 0	5/16	2 5/8	1 11/16	1 1/8	1000	450	69.80
118	0 to 000	3/8	3	1 15/16	1 1/4	650	450	90.80
119	000 to 200000 CM	3/8	3 3/8	2 1/4	1 3/8	450	445	114.00

Heavy Cap and Heavy Base

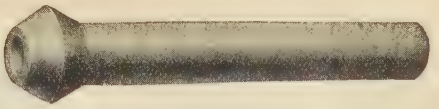
120	14 to 6	1/4	1 7/8	1 1/8	7/8	1400	435	$55.90
121	6 to 2	5/16	2 1/4	1 3/8	1	1050	420	69.40
122	2 to 0	5/16	2 5/8	1 11/16	1 1/8	800	430	75.50
123	0 to 000	3/8	3	1 15/16	1 1/4	600	445	97.00
124	000 to 200000 CM	3/8	3 3/8	2 1/4	1 3/8	400	425	121.30
125	No. 10 Duplex	3/8	3 3/8	2 1/4	1 3/8	400	435	123.60
126	200000 to 500000 CM	7/16	4 1/4	2 5/16	1 5/8	250	475	186.10
127	500000 to 1000000 CM	9/16	4 3/4	3 1/4	1 13/16	200	515	240.20
128	800000 to 1250000 CM	9/16	5 3/8	3 3/16	2	140	525	304.00
129	1000000 to 2000000 CM	9/16	6	4 3/8	2 1/4	100	505	409.50

Thomas Light Duty 1-Wire Cleats

White Glaze

Cat. No.	Wire Size	Dimensions, Inches H	L	W	No. in Bbl.	Wt. Lbs. per Bbl.	Price per 1000
1 -Reg.	14 to 6	1/4	1 7/8	13/16	2800	475	$42.00
1½-Reg.	6 to 2	5/16	2 1/4	15/16	1800	470	49.00
2 -Reg.	2 to 0	5/16	2 1/4	1 1/16	1500	465	55.80
2½-Reg.	0 to 000	3/8	2 11/16	1 3/16	950	475	77.80
3 -Reg.	000 to 200000 CM	3/8	3 1/8	1 1/4	800	450	86.20
1-A	14 to 6	1/4	1 7/8	13/16	2400	525	44.50
1½-A	6 to 2	5/16	2 1/4	15/16	1400	475	53.22
2-A	2 to 0	5/16	2 1/4	1 1/16	1200	475	61.00
2½-A	0 to 000	3/8	2 11/16	1 3/16	800	460	85.60
3-A	000 to 200000 CM	3/8	3 1/8	1 1/4	700	455	92.70
1-B	14 to 6	1/4	1 7/8	13/16	1800	485	47.10
1½-B	6 to 2	5/16	2 1/4	15/16	1150	480	58.30
2-B	2 to 0	5/16	2 1/4	1 1/16	1000	480	66.80
2½-B	0 to 000	3/8	2 11/16	1 3/16	750	485	88.60
3-B	000 to 200000 CM	3/8	3 1/8	1 1/4	650	480	98.40
3¼-B	No. 10 Duplex	3/8	3 3/16	1 5/16	450	405	106.50
3½-B	200000 to 500000 CM	7/16	3 3/16	1 5/16	450	450	126.50
4-B	500000 to 1000000 CM	9/16	3 3/4	1 3/8	375	525	153.20
4¼-B	800000 to 1250000 CM	9/16	5	1 7/8	250	550	234.80
4½-B	1000000 to 2000000 CM	9/16	5½	2	200	525	285.80

Porcelain Tubes



Approximate Number of Standard Tubes per Barrel and Approximate Shipping Weights per 1000

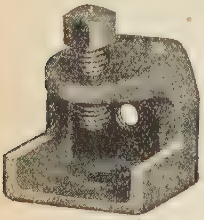
Length Under Head Inches	5/16-Inch Hole 9/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100	3/8-Inch Hole 11/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100	1/2-Inch Hole 13/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100
½	13000	28	$1.60	12000	28	$2.00	....	..	.....
1	9500	38	1.70	8800	37	2.10	5500	56	$2.70
1½	8200	43	1.80	7500	43	2.20	4200	74	2.80
2	7000	45	1.90	6000	54	2.40	3500	86	3.00
2½	5500	56	2.10	4000	76	2.70	3000	100	3.30
3	4500	63	2.30	3100	90	3.00	2500	114	3.70
4	3600	80	3.00	2300	117	4.00	2000	138	4.80
5	2900	98	3.90	1900	142	5.00	1600	169	6.00
6	2000	117	5.00	1400	200	6.00	1300	204	7.20
8	2000	140	9.00	1500	180	10.50	1000	255	13.00
10	1600	194	16.70	1000	300	18.60	900	311	21.50
12	1050	286	24.40	900	322	26.70	800	344	30.00
14	900	333	32.10	800	363	34.80	700	393	38.50
16	750	387	39.80	600	483	42.90	550	500	47.00
18	650	385	47.50	500	580	51.00	450	589	55.50
20	550	455	55.20	450	644	59.10	400	662	64.00
24	500	500	70.60	400	725	75.30	350	757	81.00

Length Under Head Inches	5/8-Inch Hole 15/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100	3/4-Inch Hole 1 3/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100	1-Inch Hole 1 7/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100
1	3700	78	$4.00	3000	93	$6.00	....	...	.....
1½	3000	97	4.60	2200	127	7.00	1400	193	$11.20
2	2500	112	5.20	1700	159	8.00	1000	260	12.50
2½	2200	127	5.80	1400	193	9.00	800	325	13.80
3	2000	135	6.50	1200	217	10.00	650	385	15.00
4	1750	149	8.00	1000	250	11.60	550	436	16.80
5	1450	155	9.50	900	239	13.20	500	440	18.60
6	950	226	11.00	550	373	14.80	450	489	20.40
8	680	294	14.00	450	444	18.00	400	525	24.00
10	550	364	25.00	300	667	29.00	280	750	37.50
12	500	400	34.00	250	800	39.00	220	955	50.00
14	450	444	43.00	200	900	49.20	180	1167	62.50
16	400	500	52.00	200	1000	59.40	160	1312	75.00
18	350	571	61.00	175	1100	69.60	150	1400	87.50
20	350	700	70.00	175	1200	79.80	120	1750	100.00
24	300	800	88.00	150	1334	100.00	100	2100	125.00

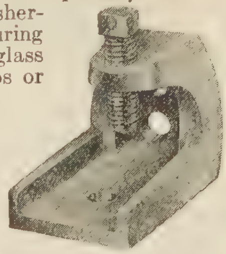
Length Under Head Inches	1¼-Inch Hole 1 13/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100	1½-Inch Hole 2 3/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100	1¾-Inch Hole 2 5/16-Inch O.D. Tubes per Barrel	Wt. Lbs. per 1000	Price per 100
2½	450	578	$19.00	325	815	$25.50	275	982	$34.00
3	400	650	21.00	300	883	28.00	250	1080	37.00
4	350	714	24.00	250	1020	32.00	225	1156	44.50
5	325	708	27.20	180	1306	36.00	160	1500	52.00
6	275	836	30.60	160	1407	40.50	140	1714	60.00
8	220	1000	37.60	140	1607	49.00	120	1917	75.00
10	200	1100	45.00	120	1875	58.00	100	2300	90.00
12	160	1375	70.00	100	2250	102.50	90	2556	160.00
14	120	1833	87.00	80	2812	123.50	75	3067	190.00
16	100	2200	104.00	60	3750	144.50	55	4182	220.00
18	80	2750	121.00	50	4500	166.00	45	5111	250.00
20	60	3200	138.00	45	4800	187.50	40	5500	280.00
24	60	3667	172.00	45	5000	230.00	40	5750	340.00

Universal Insulator Supports

Supports are malleable iron clamp fitted with cup-pointed casehardened steel set screws (cadmium-plated, electro-galvanized or sherardized) for securing porcelain and glass insulators, knobs or brackets to exposed steel framework in all classes of structures.



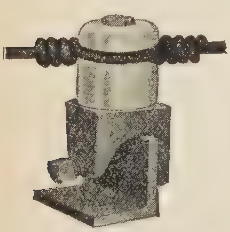
Nos. 500, 501, 502 and 503



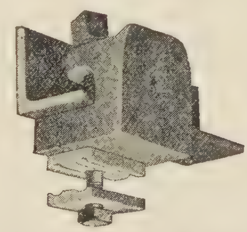
Nos. 505 and 506

Cat. No.	Per 100	Size Inches	*Standard Tapping: Tapping Inches	*Standard Tapping: Threads per Inch	Std. Pkg.	Wt., Lbs. per 100
500	$20.00	1	1/4	20	100	20
501	34.00	1½	5/16	18	100	47
502	46.00	2	3/8	16	100	86
503	68.00	2½	1/2	13	100	166
†505	44.00	2½ Special	3/16	24	100	84
†506	56.00	2 Special	3/8	16	100	117

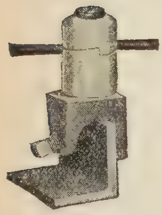
*Tapped as specified without extra charge.
†Carried in stock untapped; specify tapping when ordering.
Prices include leather washers but no machine screws.



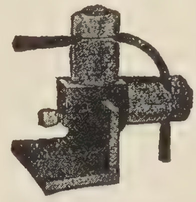
No. 502 Support with No. 3½ Insulator



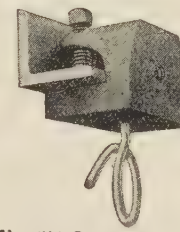
No. 502 Support Used with Clamp for Carrying Rome-X, Rubber-Covered Wires, Etc.



No. 501 Support with No. 33 Sectional Insulator



No. 500 Support with Two No. 5½ Split Insulators



No. 501 Support Used with K. & M. Rings

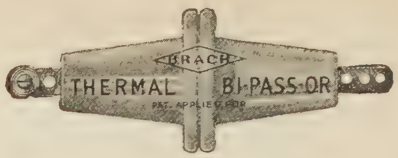
Machine Screws

For Attaching Standard Insulators to Universal Supports

Diameter Inches	Description	Length Inches	Threads per Inch	Per 100
3/16	Flat Head Machine Screws	2¼	24	$2.00
1/4	Flat Head Machine Screws	2	20	2.30
1/4	Flat Head Machine Screws	2½	20	3.00
5/16	Flat Head Machine Screws	2¼	18	4.30
5/16	Flat Head Machine Screws	2½	18	4.50
5/16	Flat Head Machine Screws	2¾	18	4.70
3/8	Round Head Machine Screws	2¼	16	5.50
3/8	Round Head Machine Screws	2½	16	6.00
3/8	Flat Head Machine Screws	2½	16	6.00
3/8	Flat Head Machine Screws	3¼	16	9.80
3/8	Machine Bolt	3	16	4.70
3/8	Machine Bolt	3½	16	4.80
1/2	Machine Bolt	2	13	4.80
1/2	Machine Bolt	3½	13	7.50
1/2	Machine Bolt	3¾	13	7.70
1/2	Machine Bolt	4	13	7.90

Other size machine screws can be furnished to order; prices upon application.

Brach Thermal Bi-Pass-Ors



Every Neon sign should have a Brach Thermal Bi-Pass-Or across each section of glass. It keeps the balance of the sign operating when a glass section breaks.

Avoids outside jumpers, costly servicing and radio interference from broken section. Reduces fire hazard due to high open circuit voltage.

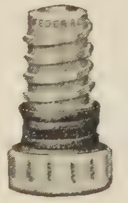
Overall length, 7 inches; diameter, 2 inches.

Packed 25 to a standard package; weight, 11 pounds.

Each .... $.50

Federal Porcelain Clamp Bushings

No. A-1



No. B-1

No. K-1

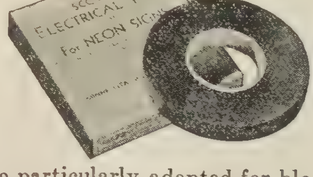
Made of vitrified porcelain in one piece. Clamping rings are made of metal, threaded to fit threads on the porcelain. By reversing the clamp ring bushings can be used on thicker material. Bushings furnished in all colors.

Nos. K-1 and K-2 elbow bushings are of a special shape for outdoor work, preventing water from entering around wire; also prevents damage to wire or insulation by sudden bending at the bushing.

Cat. No.	Each	Conduit K.O. Size In.	I.D. In.	O.D. In.	Length Under Head In.	Approx. Max. Size R.C. Wire	Std. Pkg.	Ship. Wt. Lbs. Std. Pkg.
A-1	$6.00	‡1/4	5/16	41/64	5/8	No. 10	500	15
A-1½	7.25	1/2	5/16	13/16	9/16	No. 10	250	14
†A-1½LS	7.25	1/2	5/16	13/16	3/4	No. 10	250	16
A-2	7.25	1/2	15/32	13/16	5/8	No. 8	250	12
A-2 LS	8.25	1/2	27/64	13/16	3/4	No. 8	250	14
A-2½	7.25	1/2	33/64	13/16	5/8	*No. 4	250	11
A-3	9.60	3/4	9/16	1	7/8	No. 3	250	22
A-4	12.80	1	3/4	1 5/16	13/16	No. 00	125	18
A-5	17.25	1¼	1⅛	1⅝	15/16	450000 C.M.	125	25
A-6	31.00	2	1⅝	2 5/16	1 1/16	1000000 C.M.	60	24
B-1	12.00	‡1/4	9/32	41/64	1¼	No. 10	250	11
K-1	18.00	‡1/4	9/32	41/64	11/16	No. 10	250	13
K-2	22.50	1/2	13/32	13/16	1 1/32	No. 8	150	15

*For ½-inch Neon sign cable. †L.S., long shank. ‡Loom.

Scotch Electrical Tape for Neon Signs



A black tape particularly adapted for blocking out turnbacks and spacing between letters on Neon signs.

Requires no moistening to apply; permits of faster working. Has instant adhesion to glass and the slightest pressure seals it. Will withstand all weather conditions.

The thinness of this tape makes for easier wrapping.

Rolls contain 72 yards.

Width .... inches	1/4	3/8	1/2	3/4	1	1½	2
Per Roll	$1.00	1.20	1.30	1.70	2.10	3.15	4.15

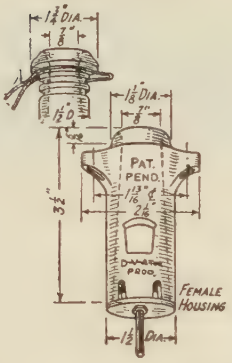
Neon D-V-A-Tor Sign Fittings

New Adjustable Electrode Housings—No Danger of Puncturing Electrode

No. 88
Large Size

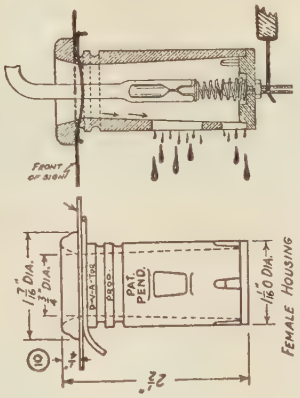
All These Housings Also Made with D-V-A-Tor Combination

No. 87
Medium Size

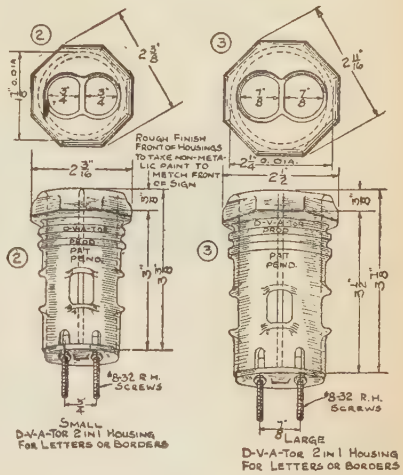


2 Types Front Mounting, Spring-Clamp or Screw

All Housings Made on Principle Shown Below—Water Cannot Come in Contact with Electrode



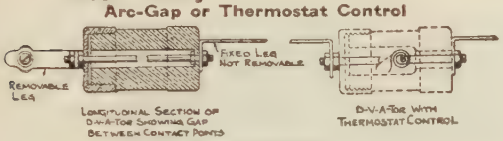
No. 89
Small Size for Window Sign



No. 93 **No. 94**
Double Housings—2 in 1
Also D-V-A-Tor Combination

Neon Safety Device D-V-A-Tor

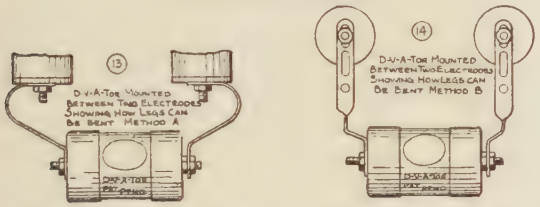
Arc-Gap or Thermostat Control



Nos. 90-91-92

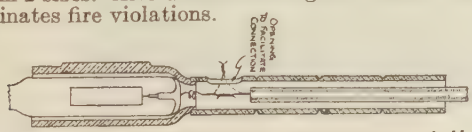
A Neon fire protector, fulfilling all requirements of the law. Reduces fire insurance rates.

D-V-A-Tor Control



Window Bell and Pipe for Skeleton Sign

Bell in 2 sizes. Also double housing for window border. Eliminates fire violations.



No. 101 Assembly of D-V-A-Tor Electrode Bell and H.T. Wire Bushing

No. 102
Large Bell for 15 MM. Electrode and Less

No. 103
Small Bell for 12 MM. Electrode and Less

New Cable Support

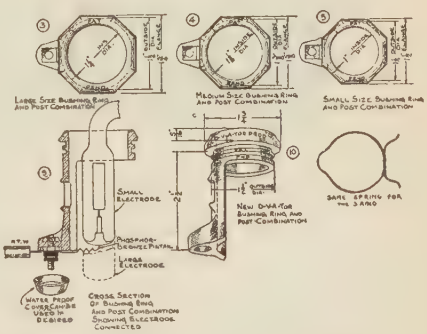
Quick Mounting

Nos. 12, 13, 14, 15

No. 10348
Brass Connector

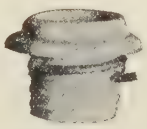
New Ring Post Combinations

No. 95 **No. 96** **No. 113**

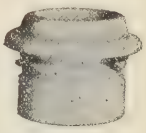


Made in 3 sizes: Large, medium and small.

Bushings



No. 10549



No. 10550

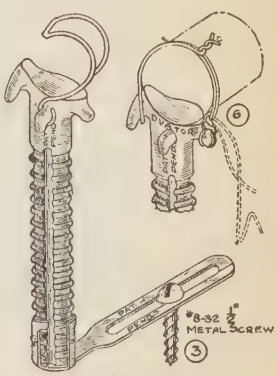
No. 10356—1⅛-Inch Hole
No. 10280—1¼-Inch Hole
No. 10138—1½-Inch Hole

Cable Bushings

With Clip

Nos. 10376-10360

3-Way Tie Glass Post

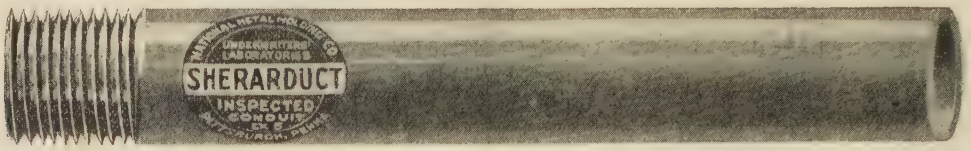


No. 120

Rigid Steel Conduit

Installation of Rigid Steel Conduit in buildings is recognized as the most practicable method of protecting electric wires, and making provision for their replacement when judged advisable. The first requirement of such conduit is that it shall be permanent.

Sherarduct



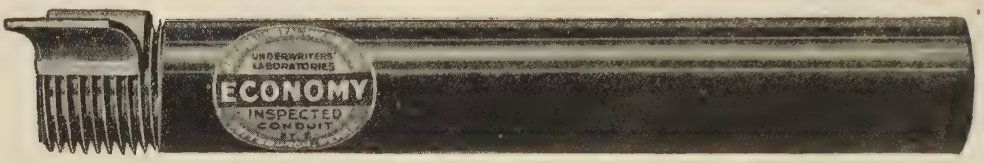
Sherarduct Rigid Steel Conduit manufactured from spellerized steel is the impregnable wiring raceway.

Zinc-alloy and pure zinc protection obtained over the inside and outside surfaces in the sherardizing process, and elastic acid-proof enamel baked on, assure permanence under all conditions of moisture and acid corrosion.

Sherarduct elbows, nipples and couplings are manufactured of the same high grade spellerized steel as Sherarduct conduit, and are given the same zinc and enamel protection against corrosion.

The threads on Sherarduct conduit are cut clean and sharp. The annealed steel bends, cuts, and threads easily because of annealing. Wires slide quickly on glass-like inside enamel of sherarduct.

Economy



Economy Rigid Steel Conduit is thoroughly coated inside and outside with elastic and acid-proof enamel, for installation under less rigorous corrosive conditions.

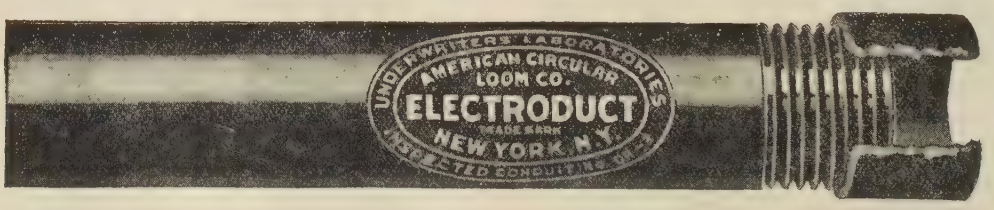
It is manufactured of the same high grade spellerized steel as Sherarduct Conduit, and bends easily for offsets and angles. The enamel used on Economy Conduit will not crack or chip off under the roughest handling and remains intact when Economy is bent. Economy Elbows, nipples and couplings are given the same thorough enamel protection as Economy Conduit.

On sizes of Economy Conduit up to 2 inches inclusive, thread protectors are furnished; on all larger sizes excess enamel is carefully removed from the threads before shipment.

X Duct

Xduct is electro-galvanized conduit manufactured from spellerized and scale-free tubing, the inner surface raceway is coated with a highly glazed, hard, conduit enamel, unaffected by acids and alkali, this enamel is elastic and is not affected when the conduit is bent.

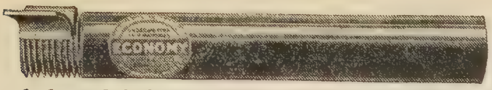
Electroduct



Electroduct is enameled both inside and outside, manufactured from spellerized, scale-free tubing. The enamel will bend with the conduit without cracking or flaking. Electroduct is full standard weight, threads are cut sharp and clean.

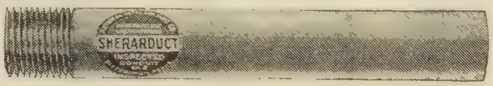
Rigid Steel Conduit

Enameled Conduit



Enameled conduit is manufactured from mild drawn steel tubing. Before enameling, the tubing is thoroughly cleaned and freed from dirt, grease, scale, silicates and burrs. This process leaves clean surface for the application of the compound.

Sherarduct

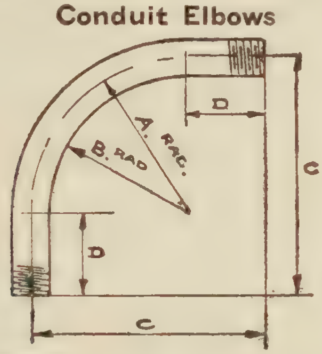


Sherarduct rigid conduit is made of full weight mild spellerized steel tube and finished under the famous sherardizing process. In this process pure zinc is alloyed with the steel tube both inside and outside to form a rustproof finish which is so entirely a part of the pipe that it cannot be knocked or chipped off.

Conduit

Standard Pipe Size Inches	Diameter, Inches Inside	Outside	Threads per Inch	Weight Pounds per 100 Feet	Price per 100 Feet
½	.622	.840	14	85.2	**$8.50**
¾	.824	1.050	14	113.4	**11.50**
1	1.049	1.315	11½	168.4	**17.00**
1¼	1.380	1.660	11½	228.1	**23.00**
1½	1.610	1.900	11½	273.1	**27.50**
2	2.067	2.375	11½	367.8	**37.00**
2½	2.469	2.875	8	581.9	**58.50**
3	3.068	3.500	8	761.6	**76.50**
3½	3.548	4.000	8	920.2	**92.00**
4	4.026	4.500	8	1088.9	**109.00**
4½	4.506	5.000	8	1264.2	**127.00**
5	5.047	5.563	8	1481.0	**148.00**
6	6.065	6.625	8	1918.5	**192.00**

Conduit Elbows



Size Inches	Actual Diameter Inches Inside	Outside	Dimensions, Inches A	B	C	D	Weight Pounds per 100
¼	.364	.540	3¾	3½	6¾	3	41
⅜	.493	.675	3¾	3 7/16	6¾	3	55
½	.622	.840	4	3 9/16	6¾	2¾	82
¾	.824	1.050	4½	4	6 27/32	2 11/32	109
1	1.049	1.315	5¾	5 1/16	8½	2 23/32	201
1¼	1.380	1.660	7¼	6 7/16	9 15/16	2 11/16	313
1½	1.610	1.900	8¼	7 5/16	11⅝	3⅜	441
2	2.067	2.375	9½	8 5/16	14 5/16	4 13/16	707
2½	2.469	2.875	10½	9 1/16	17	6½	1411
3	3.068	3.500	11¾	10	17¼	5½	1850
3½	3.548	4.000	13¾	11¾	22 9/16	8 13/16	2979
4	4.026	4.500	16	13¾	23 1/16	7 1/16	3528
5	5.047	5.563	24	21¼	32	8	6575
6	6.065	6.625	30	26 11/16	36¾	6¾	9645

Couplings

Standard Pipe Size Inches	Weight Pounds per 100	Price per 100	Standard Pipe Size Inches	Weight Pounds per 100	Price per 100
½	11.6	**$7.00**	3	249.8	**$60.00**
¾	20.9	**10.00**	3½	424.1	**80.00**
1	34.3	**13.00**	4	474.1	**100.00**
1¼	53.5	**17.00**	4½	550.0	**150.00**
1½	74.3	**21.00**	5	700.0	**165.00**
2	120.8	**28.00**	6	750.0	**240.00**
2½	172	**40.00**	.	.....	......

In ordering, specify finish desired.

Standard Sizes of Conduit

For Installation of Rubber Covered Wire and Cable

The following tables apply only to complete conduit systems:

2-Wire and 3-Wire Systems

Size Wire AWG	Number of Wires in One Conduit — Minimum Size of Conduit in Inches: 1	2	3	4	5	6	7	8	9
14	½	½	½	½	¾	¾	¾	1	1
12	½	½	½	¾	¾	1	1	1	1¼
10	½	¾	¾	¾	1	1	1¼	1¼	1¼
8	½	¾	¾	1	1	1¼	1¼	1¼	1¼
6	½	1	1¼	1¼	1½	1½	2	2	2
5	¾	1¼	1¼	1¼	1½	2	2	2	2
4	¾	1¼	1¼	1½	2	2	2	2	2½
3	¾	1¼	1¼	1½	2	2	2	2½	2½
2	¾	1¼	1½	1½	2	2	2½	2½	2½
1	¾	1½	1½	2	2	2½	2½	3	3
0	1	1½	2	2	2½	2½	3	3	3
00	1	2	2	2½	2½	3	3	3	3½
000	1	2	2	2½	3	3	3	3½	3½
0000	1¼	2	2½	2½	3	3	3½	3½	4
C. M.									
200000	1¼	2	2½	2½	3	3	3½	3½	4
225000	1¼	2½	2½	3	3	3½	...	...	...
250000	1¼	2½	2½	3	3	3½	...	...	...
300000	1¼	2½	3	3	3½	3½	...	...	...
350000	1¼	2½	3	3½	3½	4	...	...	...
400000	1¼	3	3	3½	4	4	...	...	...
450000	1½	3	3	3½	4	4½	...	...	...
500000	1½	3	3	3½	4	4½	...	...	...
550000	1½	3	3½	4	4½	5	...	...	...
600000	2	3	3½	4	4½	5	...	...	...
650000	2	3½	3½	4	...	...	...	...	...
700000	2	3½	3½	4½	...	...	...	...	...
750000	2	3½	3½	4½	...	...	...	...	...
800000	2	3½	4	4½	...	...	...	...	...
850000	2	3½	4	4½	...	...	...	...	...
900000	2	3½	4	4½	...	...	...	...	...
950000	2	4	4	5	...	...	...	...	...
1000000	2	4	4	5	...	...	...	...	...
1100000	2½	4	4½	6	...	...	...	...	...
1200000	2½	4½	4½	6	...	...	...	...	...
1250000	2½	4½	4½	6	...	...	...	...	...
1300000	2½	4½	5	6	...	...	...	...	...
1400000	2½	4½	5	6	...	...	...	...	...
1500000	2½	4½	5	6	...	...	...	...	...
1600000	2½	5	5	6	...	...	...	...	...
1700000	3	5	5	6	...	...	...	...	...
1750000	3	5	5	6	...	...	...	...	...
1800000	3	5	6	6	...	...	...	...	...
1900000	3	5	6	...	...	...	...	...	...
2000000	3	5	6	...	...	...	...	...	...

Permissible Exceptions to Above Table

Stage pocket and border circuits, sign flashers, Classes 1, 2 and 3 signal circuits, elevator control wires, and wires between controllers and motors, and otherwise as permitted by the authority enforcing this code (see table below). In addition the following exceptions are permitted where the run of rigid conduit or electrical metallic tubing does not exceed 50 feet in length and does not contain more than the equivalent of 2 quarter-bends from end to end; 3 No. 6 stranded or 6 No. 8 solid conductors in a 1-inch conduit; and for services only, 2 No. 6 Type R, and 1 No. 6 bare, wires, 2 No. 4, Type R, and 1 No. 4, bare, wires, in 1-inch conduit and 2 No. 2, Type R, and 1 No. 2, bare, wires in 1¼-inch conduit.

A smaller bare wire may be used in each of the above combinations if of suitable current carrying capacity.

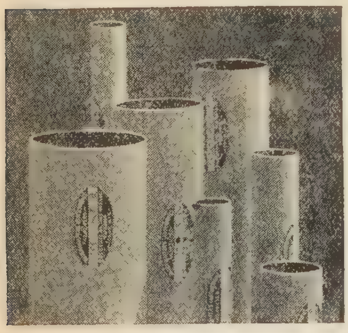
3-Conductor Convertible System

Size of Wires 2 Wires	1 Wire	Size Conduit Inches	Size of Wires 2 Wires	1 Wire	Size Conduit Inches
14	10	¾	00	350000	2½
12	8	¾	000	400000	2½
10	6	1	0000	550000	3
8	4	1	250000	600000	3
6	2	1¼	300000	800000	3
5	1	1¼	400000	1000000	3½
4	0	1½	500000	1250000	4
3	00	1½	600000	1500000	4
2	000	1½	700000	1750000	4½
1	0000	2	800000	2000000	4½
0	250000	2	......	....	...

Stage Pocket and Border Circuits, and Elsewhere By Special Permission of Inspectors

Size Wire	Maximum Number of Wires in Conduit: 1-Inch	1¼-Inch	1½-Inch	2-Inch	2½-Inch	3-Inch
14	11	19	26	43	61	95
12	..	15	21	34	50	77
10	..	12	16	27	38	60
8	..	..	13	22	31	49
6	..	..	..	..	14	22

Steeltubes Electrical Metallic Tubing



No threads to cut, ductile, bends easily, is light, tough and strong; resists corrosion.

Steeltubes takes up less space and consequently can be used in narrower quarters.

Hangers for ⅜-inch heavy conduit are the right size for ½-inch Steel-tubes, hangers for ¾-inch Steeltubes are the same as for ½ inch heavy conduit, etc.

Electrunite Steeltubes Conduit with the knurled inside finish showed by actual test a saving of 20 to 30 per cent in the effort required to pull cable through. The cable rides the tops of the tiny knobs instead of making contact the entire length.

The 1933 Code approves Steeltubes for open and concealed work and buried in concrete (except cinder fill) in all sizes up to 2 inches inclusive, 600 V. No. 4 wires.

Furnished in 10-foot lengths; galvanized finish only—inside finish is black enamel.

Size In.	I.D. In.	O.D. In.	Feet to Bundle	Approx. Wt. Lbs. per 1000 Ft. without Couplings	45° or 90° Elbows without Couplings Size In.	Wt. Lbs. per 1000
⅜	.493	.577	100	254	...	...
½	.622	.706	100	321	...	...
¾	.824	.922	50	488	...	...
1	1.049	1.163	50	711	...	...
1¼	1.380	1.508	50	985	1¼	150
1½	1.610	1.738	50	1141	1½	200
2	2.067	2.195	30	1470	2	275

Special Large Radius Elbows

For Thick Wall Conduit

Black Enameled or Sherardized

Size Inches	Price, Each — Radius, Inches 12	15	18	24	30	36	42	48
1	$1.35	$1.60	$2.00	$2.30	$2.60	$3.00	$3.40	$3.80
1¼	1.50	1.75	2.20	2.50	2.90	3.40	3.80	4.30
1½	1.80	2.10	2.60	3.00	3.50	4.00	5.00	6.00
2	2.55	3.00	3.70	4.30	4.90	5.70	6.40	7.20
2½	3.30	3.90	4.70	5.50	6.40	7.40	8.30	9.40
3	Std.	6.00	7.30	8.50	9.80	11.50	12.80	14.50
3½	....	Std.	15.10	17.80	20.50	24.00	26.70	30.20
4	....	....	16.60	19.50	22.50	26.30	29.30	33.20
4½	....	....	Std.	27.30	31.40	36.80	40.90	46.30
5	....	....	....	Std.	32.20	37.80	42.00	47.60
6	....	....	....	....	Std.	39.50	43.90	49.70

90-degree elbows take above list.

60-degree elbows take above list less 5 per cent.

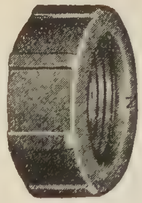
45-degree elbows take above list less 10 per cent.

30-degree elbows take above list less 15 per cent.

Dimensions

Radius Inches	Offset Feet	Offset Inches	Across Straight End Inches	Length Unbent Feet	Length Unbent Inches
12	1	5½	5½	2	3
15	1	8	5½	2	11
18	2	...	6	3	4
24	2	6	6	4	1
30	3	...	6	4	11
36	3	9	9	6	2
42	4	5	11	7	4
48	5	...	12	8	4

National Conduit Bushings



Sherardized finish.

Packed in strong wooden cases.

Size In.	Per 100	Std. Pkg.	Wt., Lbs. Std. Pkg.
¼	$6.00	1000	30
⅜	6.00	1000	35
½	6.00	2500	60
¾	8.00	1000	35
1	15.00	500	45
1¼	20.00	200	24
1½	25.00	100	15
2	40.00	50	10
2½	60.00	30	9
3	90.00	25	10
3½	200.00	25	14
4	300.00	25	20
4½	400.00	10	12
5	500.00	10	15
6	600.00	10	23

T & B Malleable Conduit Bushings

Bushings are non-breakable and thoroughly rust-proofed.

Approved by Underwriters Laboratories.

Packed in neat, strong boxes, each box marked to show contents.

No.	Size In.	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100	Price per 100	No.	Size In.	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100	Price per 100
121	⅜	100	1000	2	$6.00	128	2½	..	30	30	$60.00
122	½	100	2500	3	6.00	129	3	..	25	40	90.00
123	¾	100	1000	4	8.00	130	3½	..	25	76	200.00
124	1	50	500	9	15.00	131	4	..	25	108	300.00
125	1¼	20	200	11	20.00	132	4½	..	10	120	400.00
126	1½	50	100	13	25.00	133	5	..	10	165	500.00
127	2	..	50	22	40.00	134	6	..	10	260	600.00

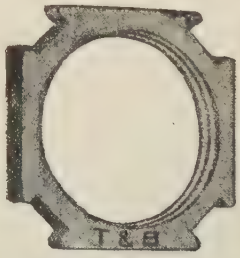
National Conduit Locknuts

Sherardized Finish

†Packed in strong wooden cases.

Size In.	†Std. Pkg.	Wt., Lbs. Std. Pkg.	Price per 100	Size In.	†Std. Pkg.	Wt., Lbs. Std. Pkg.	Price per 100
¼	1000	10	$2.50	2½	30	6	$30.00
⅜	1000	12	2.50	3	25	7½	50.00
½	2500	42	2.50	3½	25	9	70.00
¾	1000	26	3.50	4	25	12	100.00
1	500	20	6.00	4½	10	7½	140.00
1¼	200	16	10.00	5	10	9	160.00
1½	100	12	15.00	6	10	19	200.00
2	50	8	20.00	...	..	....	......

T & B Locknuts



Nos. 140 to 145 are extra heavy steel and have 4 notches for driving. Nos. 146 to 153 are malleable iron and have 8 high ribs.

Steel

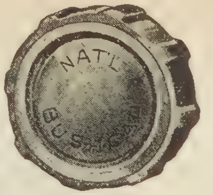
Cat. No.	Per 100	Size In.	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
140	$2.50	⅜	100	1000	1½
141	2.50	½	100	2500	1½
142	3.50	¾	100	1000	2½
143	6.00	1	50	500	4
144	10.00	1¼	20	200	7
145	15.00	1½	100	100	8

Malleable Iron

Cat. No.	Per 100	Size In.	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
146	$20.00	2	50	50	12
147	30.00	2½	30	30	22
148	50.00	3	25	25	38
149	70.00	3½	25	25	48
150	100.00	4	25	25	52
151	140.00	4½	10	10	65
152	160.00	5	10	10	90
153	200.00	6	10	10	110

National Bushcaps

Sherardized Bushings—Tin Caps



National Bushcaps placed on the open ends, when conduits are installed, will keep them clean and clear until wires are drawn in. Std. pkg. 1000.

½-Inch.................per 100 **$7.50**
¾-Inch.................per 100 **10.00**
1 -Inch.................per 100 **17.50**

T & B Capped Bushings

Cat. No.	Busbing Comp. with Cap, In.	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
1460	½	100	1000	2½	**$7.50**
1461	¾	100	100	4	**10.00**
1462	1	100	100	9	**17.50**
1463	1¼	50	100	12	**22.50**
1464	1½	25	100	15	**27.50**
1465	2	25	50	24	**32.50**

National Bondnuts

Bondnuts have sharp beveled-edge teeth that cut into enamel and steel of box, gripping firmly and tightly, forming a perfect ground.

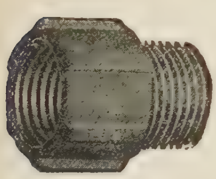
Size.......in.	½	¾	1	1¼	1½	2
Per 100......	**$8.50**	**14.30**	**21.50**	**36.30**	**40.70**	**73.00**
Std. Pkg.....	1000	1000	1000	200	100	100
Pkg. Wt. lbs.	42	26	20	16	12	8

Chase Nipples

Cat. No.	Per 100	Size In.	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
840	**$5.00**	¼	100	100	2
841	**5.00**	⅜	100	200	3
842	**5.00**	½	100	200	4
843	**8.00**	¾	100	100	7
844	**15.00**	1	25	100	14
845	**18.00**	1¼	10	100	22
846	**20.00**	1½	50	50	30
847	**30.00**	2	50	50	58
848	**50.00**	2½	25	25	76
849	**80.00**	3	25	25	104
850	**250.00**	3½	10	20	130
851	**325.00**	4	5	5	150
852	**500.00**	4½	5	5	180
853	**750.00**	5	5	5	210

Where a Chase Nipple and coupling is used a box can be removed without disturbing the conduit. Where two outlet boxes are to be used back to back, break out center knockouts and use a Chase Nipple and a locknut to hold the boxes together. Plated with Tabolite Superior galvanizing.

T & B Malleable Iron Fixture Extension Pieces



Cat. No.	Per 100	Size Inches	Unit Pkg.	Std. Pkg.	Weight Pounds per 1000
1590	**$4.00**	⅜x1	50	1000	70
1591	**4.00**	⅜x1⅜	50	1000	85
1592	**4.00**	⅜x 11/16	50	1000	65

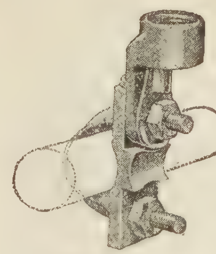
T & B Grounding Wedge-Lugs

For binding service conduit, service enclosures or the grounded wire. Can be used either inside or outside the box. Designed to lock the conduit system together, both electrically and mechanically, without jumper wires.

Cat. No.	Size In.	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100	Price per 100
3650	½	100	100	2½	**$12.00**
3651	¾	100	100	5½	**14.00**
3652	1	20	50	6½	**17.00**
3653	1¼	10	50	8	**19.00**
3654	1½	10	50	10	**22.00**
3655	2	10	25	12	**32.00**
3656	2½	10	10	20	**66.00**
3657	3	10	10	23	**80.00**
3658	3½	5	5	30	**144.00**
3659	4	5	5	40	**160.00**
3660	4½	1	3	100	**240.00**
3661	5	1	2	100	**300.00**
3662	6	1	2	100	**360.00**

T & B Ground Fittings

Protective Type

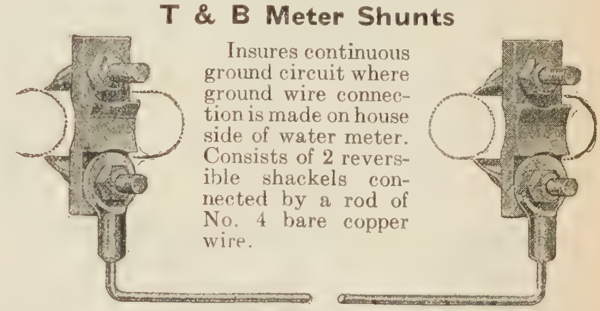


Nos. 3800, 3801 and 3802

For Rigid Conduit to ½, ¾ and 1-Inch Water Pipe

Cat. No.	Each	Size Conduit Inches	Unit Pkg.	Std. Pkg.	Weight Pounds per 100
3800	**$.70**	½	25	100	50
3801	**1.25**	¾	25	25	57
3802	**1.75**	1	10	10	65
For Rigid Conduit to 1¼, 1½ and 2-Inch Water Pipe					
3680	**$.90**	½	10	50	170
3681	**1.60**	¾	5	20	172
3682	**2.50**	1	2	10	175
For No. 8 Single Armored Cable to ½, ¾ and 1-Inch Water Pipe					
3810	**$.70**	...	25	100	48

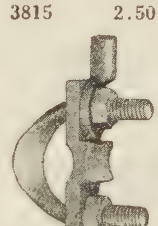
T & B Meter Shunts



Insures continuous ground circuit where ground wire connection is made on house side of water meter. Consists of 2 reversible shackels connected by a rod of No. 4 bare copper wire.

Cat. No.	Each	For Water Pipe, Inches	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
3812	**$1.25**	½, ¾ and 1	25	25	112
3813	**1.50**	1¼, 1½ and 2	20	20	172
3814	**2.00**	2½, 3 and 3½	10	10	350
3815	**2.50**	4, 4½ and 5	5	5	400

No. 3830 T & B Ground Fittings

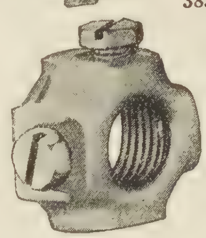


If a conduit connection is not required, it is economical to use this fitting, which consists of U-bolt, adapter bar and soldering lug assembly without conduit hub. Solder lug takes No. 4 wire.

For ½, ¾ and 1-Inch Water Pipe

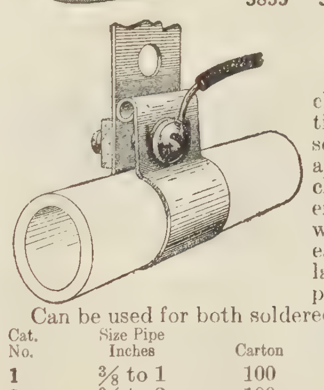
Cat. No.	Each	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
3830	**$.50**	25	25	40

T & B Grounding Bushings



Cat. No.	Per 100	Size Inches	Unit Pkg.	Std. Pkg.	Wt.,Lbs. per 100
3850	**$7.50**	½	100	100	8
3851	**9.00**	¾	100	100	9
3852	**15.00**	1	50	50	12
3853	**18.00**	1¼	20	50	15
3854	**24.00**	1½	50	50	30
3855	**35.00**	2	25	25	35

Sherman Ground Clamps



An all copper, one-piece clamp which can be drawn up tight. The roll portion for soldering is turned in to rest against opposite tongue of clamp, preventing the two ends from tipping together when tightened; holding the ears parallel, and insuring large amount of drawing power.

Can be used for both soldered and solderless connections.

Cat. No.	Size Pipe Inches	Carton	Std. Pkg.	Approx. Wt. Lbs., Std. Pkg.	Price Each
1	⅜ to 1	100	1000	80	**$.20**
2	⅜ to 2	100	1000	125	**.25**
3	⅜ to 3	50	500	80	**.30**
4	⅜ to 4	..	250	50	**.60**

T & B Erickson Conduit Couplings

Conduit Union does away with running threads, saving dies and labor. Permits opening of conduit at any desired point. Enables the start of circuit from 2 outlets and makes a good, strong connection at any point in the run. The pipe ends abut so that no space is left between the lengths of conduit, therefore, it is not necessary to draw the 2 ends of the conduit together. Vibration will not loosen a connection made with an Erickson coupling. The hexagon shoulder and ridges on the outside of the coupling make an easy grip for a pipe wrench.

Cat. No.	Per 100	Size Inches	Unit Pkg.	Std. Pkg.	Weight Pounds per 100
674	$32.00	⅜ for ⅜-Inch Conduit........	50	100	13
675	32.00	½ for ½-Inch Conduit........	25	100	24
676	40.00	¾ for ¾-Inch Conduit........	25	50	34
677	56.00	1 for 1-Inch Conduit..........	25	25	52
678	100.00	1¼ for 1¼-Inch Conduit......	25	25	92
679	150.00	1½ for 1½-Inch Conduit......	25	25	116
680	260.00	2 for 2-Inch Conduit..........	20	20	195
681	500.00	2½ for 2½-Inch Conduit......	20	20	380
682	800.00	3 for 3-Inch Conduit..........	10	10	420
683	1200.00	3½ for 3½-Inch Conduit......	5	5	520
684	1600.00	4 for 4-Inch Conduit..........	5	5	620
685	2000.00	4½ for 4½-Inch Conduit......	2	2	850
686	2500.00	5 for 5-Inch Conduit..........	2	2	900

T & B Malleable Iron Fixture Hickeys

Blind, Female Type

Both ends perfectly aligned. Clean castings. Clean cut threads.

Cat. No.	Size In.	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price per 100
1518	⅜x⅛	1000	73	$6.50
1519	⅜x¼	1000	76	6.50
1520	⅜x⅜	1000	80	7.50

T & B Malleable Iron Fixture Hickeys

Combination Open Male and Female

Packed 50 in a carton.

Cat. No.	Size, Inches Male	Size, Inches Female	Std. Pkg	Wt., Lbs. per 100	Price per 100
1535	⅜	⅛	1000	73	$6.50
1536	⅜	¼	1000	76	6.50
1537	⅜	⅜	1000	80	7.50

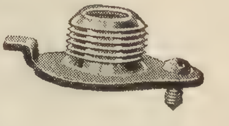
National Adjustable Fixture Studs

Nos. 2251 and 2252, unit pkg. 50, std. pkg. 1000. Bolts with nuts, unit pkg. 500, std. pkg. 1000.

Cat. No.	Size In.	Description	Price per 100
2251	⅜	Male	$3.62
2252	½	Male	8.12
....	⅜ x $\frac{3}{16}$	Round Head Sherardized Steel Bolts with Nuts..................	.50

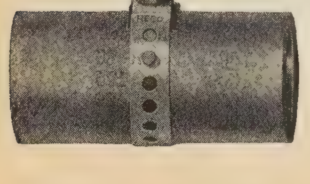
National Economy Fixture Studs

Strong. Easy to install. Saves at least two-thirds the time required for installation besides a saving in bolts and nuts.



Cat. No.	Size, Inches	Price per 100
2255	⅜-Inch Male Closed End	$6.00
2256	⅜-Inch Male and Female	5.00
2257	½-Inch Male Closed End	8.00
2258	½-Inch Male and Female	7.00

No. 1 Reliable Station Ground Clamps



For telephone, radio and signal circuit station grounds.

For ⅜ to 1¼ inch pipe.

Tinned copper strips, round edge with close fitting threads.

No. 1............each **$.10**

Diamond One-Hole Malleable Clamps

Hot galvanized annealed twice before galvanizing to assure ductility. Will not crack in installation. Has but one screw hole and cuts in half the expense of screws or expansion bolts and the labor of installing as compared to the 2-hole strap.

Conduit or Pipe Size, Normal Inside Diam., In.	Per 100	Diam. Screw Hole In.	Expansion Shield or Screw Anchor Size, In.	Wt. Lbs. per 100	Std. Pkg.
⅜	$4.80	$\frac{3}{16}$	$\frac{3}{16}$x1	4	100
½	6.00	¼	$\frac{3}{16}$x1	6	100
¾	7.20	$\frac{5}{16}$	¼x1	9	100
1	9.60	$\frac{5}{16}$	¼x1	15	100
1¼	16.80	⅜	$\frac{5}{16}$x1	24	50
1½	24.00	$\frac{7}{16}$	⅜x2	38	50
2	48.00	$\frac{9}{16}$	½x2	64	25
2½	72.00	⅝	½x2	115	12
3	96.00	⅝	½x3½	150	10
3½	144.00	$\frac{11}{16}$	⅝x3½	250	10
4	156.00	$\frac{11}{16}$	⅝x3½	325	10

Di-Stampt Conduit Clamps

Pressed Steel—Hot Galvanized

Hot dipped galvanized by the Diamond process. The hollow or arched section of this clamp gives maximum strength with minimum weight.

Conduit Size In.	Per 100	No. Wood Screws	Std. Pkg.	Wt. Lbs. per 100
¼	$2.50	10	100	3
⅜	3.00	10	100	3
½	3.10	10	100	5
¾	3.75	14	100	8
1	8.00	14	100	9
1¼	14.00	18	50	10
1½	20.00	18	50	18

T & B One Hole Malleable Iron Pipe Straps

Cat. No.	Size Inches	Screw Hole Size, In.	Standard Package	Wt., Lbs. per 100	Price per 100
1275	⅜	¼	100	4	$4.00
1276	½	$\frac{5}{16}$	100	6	5.00
1277	¾	$\frac{5}{16}$	100	9	6.00
1278	1	$\frac{5}{16}$	100	13	8.00
1279	1¼	⅜	50	20	14.00
1280	1½	$\frac{7}{16}$	50	32	20.00
1281	2	½	25	68	40.00
1282	2½	$\frac{11}{16}$	25	104	60.00
1283	3	$\frac{11}{16}$	25	148	80.00
1284	3½	$\frac{11}{16}$	10	200	120.00
1285	4	$\frac{11}{16}$	10	260	180.00

Galvanized Conduit Straps

Cat. No.	Size Inches	No. to Pound	Price per Lb.	Cat. No.	Size Inches	No. to Pound	Price per Lb.
BX	Armored Cable	68	$.25	214	1½	11	$.25
210	½	45	.25	215	2	7	.25
211	¾	30	.25	216	2½	5	.25
212	1	17	.25	230	3	4	.25
213	1¼	13	.25	231	3½	2	.25

Diamond 1-Hole Rolled Steel Conduit and Cable Clamps

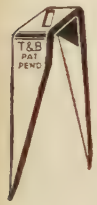
For thin wall conduit. Made of cold rolled mild steel annealed and Diamond galvanized after forming.

Efficient where light construction is to be used and where there are no severe strains.

No.	Per 100	Cable Size In.	Reg. Conduit or Pipe In.	Thin Wall Conduit In.	Wt. Lbs. per 100
*4/0	$1.65	7/16	1/8	...	1
*2/0	1.80	5/8	1/4	3/8	1 1/2
†0	4.40	11/16	3/8	1/2	4
†1	5.10	3/4	1/2	...	4 1/2
†1A	5.30	7/8	...	3/4	5
†2A	5.80	1	3/4	...	7
†2	6.00	1 1/8	...	1	7 1/2
†3A	7.00	1 1/4	1	...	15
†3	10.00	1 1/2	...	1 1/4	16
†3B	10.00	1 5/8	1 1/4	...	17
†4A	10.50	1 3/4	...	1 1/2	19
†4	10.50	1 7/8	1 1/2	...	20

*Screw hole: *3/16 inch; †9/32 inch.

No. 90 T & B 3/8-Inch Cable Clips



Straddles the cable so that the top rests across the spirals of the cable and the clip faces at right angles to the spirals of the cable. Will not harm cables.

Will take Nos. 14W2, 14W3, 12W2, 12W3, 10W2, 10W3, 8–1, and also 3/8-inch S.S. and D.S. flexible conduit. Standard package 10,000.

No. **90**.....per 1000 **$4.00**

T & B Adjustable Conduit Hangers

Type A

Hanger will fit any flange from 2 3/4 to 12 inches. It is adjustable for varying plaster lines and will support any number of conduits from 1 to 8, which may run at any angle with the beams and close against the beam, or far enough below to permit a second line of conduits to be run above. Additional runs of conduit can be added without interfering with lines already in position. It is not necessary to loosen clamp to meet any condition which may arise. No other conduit hanger will accomplish half as much at twice the cost. Clamps of stamped steel.

Cat. No.	Description	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
700	Type A Clamp (Incl. Bolts) Fits Flange from 2 3/4 to 7 3/8 In.....	25	100	33	**$30.00**
701	Type B Clamp (Incl. Bolts) Fits Flange from 7 to 12 In.....	10	100	62	**45.00**
702	Type C Clamp (Incl. Bolts) Fits Flange 8 1/2 to 11 3/8 In.....	10	100	46	**45.00**
703	Special Bolts.....	100	100	6	**5.00**

Extension used with 2 inner parts of Type A clamp, becomes Type C clamp.

Complete with Support	Std. Pkg.	Type A Cat. No.	Type A Wt., Lbs. per 100	Type A Price per 100	Type B Cat. No.	Type B Wt., Lbs. per 100	Type B Price per 100
1- 1/2"	100	**710**	45	**$34.00**	**760**	74	**$49.00**
1- 3/4"	100	**711**	46	**38.00**	**761**	75	**53.00**
1-1"	50	**712**	48	**44.00**	**762**	77	**59.00**
1-1 1/4"	50	**713**	51	**48.00**	**763**	80	**63.00**
1-1 1/2"	25	**714**	52	**52.00**	**764**	81	**67.00**
1-2"	25	**715**	56	**60.00**	**765**	85	**75.00**
1-2 1/2"	25	**716**	59	**68.00**	**766**	88	**83.00**
1-3"	25	**717**	63	**78.00**	**767**	92	**93.00**
2- 1/2"	100	**718**	58	**38.00**	**768**	87	**53.00**
2- 3/4"	100	**719**	65	**42.00**	**769**	94	**57.00**
2-1"	25	**730**	73	**48.00**	**780**	102	**63.00**
2-1 1/4"	25	**731**	85	**52.00**	**781**	114	**67.00**
2-1 1/2"	25	**732**	95	**56.00**	**782**	124	**71.00**

No. 1629 Klein's Fish Tape Pullers

This tape puller is light in weight, strong and can be carried in the vest pocket.

Weight, each, 3 1/2 ounces.

For Fish Tape

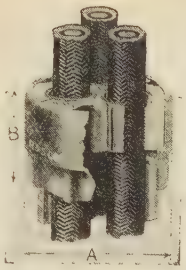
No. **1629**.....each **$2.50**

No. 12 Iron Wire

No. **1629A**.....each **$2.50**

R & S Cable Supports

Standard Conduit Type



A compact, strong and easily installed device for supporting cables in conduit risers.

Support consists of a threaded collar, not much larger in diameter than the outlet bushing which it replaces at the end of the conduit inside of the pull box. It has a set of inserts for one or more cables as required and individual tapered cable grips. They are suitable alike for lead, paper or braid-covered cables.

In installing, the collar is screwed on to end of riser, in lieu of a bushing, the cables are then pulled, the inserts dropped into socket of collar and the split, tapered grip bushings placed over the individual cables, which are now allowed to pull the grips into place by their own weight. A perceptible slack of cable should be provided between supports to allow for expansion and contraction.

Made of galvanized iron, with hard fibre cable grips.

When ordering, specify o.d. of cable to be supported.

Cat. No.	Each	Size Conduit In.	No. of Cables	Dimensions Inches A	Dimensions Inches B	*Max. Diam. Cable In.	Approx. Wt. Lbs.
1831	**$3.25**	2	1	2 7/8	2 21/32	1 3/4	2
1832	**3.25**	2	2	3 9/16	2 13/32	21/32	3 3/4
1833	**3.25**	2	3	3 9/16	2 13/32	19/32	3 3/4
1834	**3.25**	2	4	3 9/16	2 13/32	17/32	4
1841	**3.65**	2 1/2	1	3 7/16	3 5/16	2	2 1/4
1842	**3.65**	2 1/2	2	3 3/4	2 29/32	7/8	4
1843	**3.65**	2 1/2	3	3 3/4	2 29/32	27/32	4
1844	**3.65**	2 1/2	4	3 3/4	2 29/32	23/32	4 1/4
1851	**4.80**	3	1	4	3 25/32	2 1/4	4 1/4
1852	**4.80**	3	2	4 9/16	3	1 11/16	6
1853	**4.80**	3	3	4 9/16	3	1	6
1854	**4.80**	3	4	4 9/16	3	15/16	6
1862	**6.50**	3 1/2	2	5	3 7/32	1 7/32	8 1/2
1863	**6.50**	3 1/2	3	5	3 7/32	1 3/16	8 3/4
1864	**6.50**	3 1/2	4	5	3 7/32	1 1/32	9
1872	**8.10**	4	2	5 11/16	3 11/32	1 3/16	9
1873	**8.10**	4	3	5 11/16	3 11/32	1 5/16	9 1/2
1874	**8.10**	4	4	5 11/16	3 11/32	1 3/16	9 1/2

*Over insulation.

Special Tile Duct Type

Made on special order only. Used to support risers run through tile duct; can be furnished in any number of gangs.

Prices and full information upon application.

Split Type

Where installations are already in use, and the necessity of a support for the cables occurs, it is possible to utilize this type of support without the necessity of disconnecting and pulling out the cable risers. This split type can be installed around cable and the necessary inserts and bushings as used on the conduit type inserted. The range of sizes are the same as on the conduit type.

Prices and full information upon application.

Tempered Steel Fish Tapes

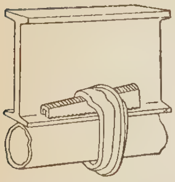
Regularly furnished any assortment of lengths, from 100 to 500 feet, put up in coils. If wire is desired in continuous lengths of 2000 feet or over it will be furnished on reels when specified.

Cat. No.	Size Inches	Weight per 1000 Feet Pounds	Price per 100 Feet
1000	1/8 x .060	24	**$2.00**
1001	3/16 x .060	35	**3.00**
1002	1/4 x .060	46	**4.00**
1003	1/8 x .030	13	**1.50**
1004	3/16 x .030	19	**2.00**
1005	1/4 x .030	25	**2.50**

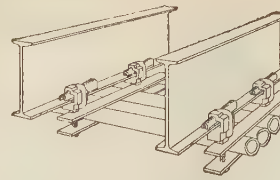
Wedgtite Pipe Hangers

Schedule CR

Furnished with Wedge

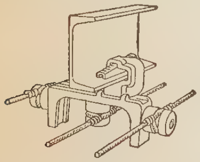


Type CHP Installed



Type CHU Installed

Wedgtite Pipe Hangers are quickly and easily installed as only a few blows of a hammer are necessary. They can be used with any I beam, channel, or other structural shape having a lower flange ⅛ to ⅝ inch thick. They consist of two pieces, a hook and a wedge, which is provided with saw teeth so that vibration will not loosen it. The wedge is interchangeable with all types and sizes of hooks.



Type CHA Installed

Types CHP and CHR are made so that one end hooks under the pipe and the other over the flange of the structural shape. The end that hooks over the flange has a groove into which the wedge is driven, tightly drawing the pipe against the flange and securely holding it in position.

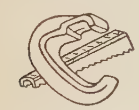
Type CHU is wedged to the flange independently of the pipe or group of pipes it is to support. A bolt is used for suspending the pipe, its head resting securely in a pocket in body of hanger. This pocket takes a ½-inch bolt. Bolt can be inserted after the hanger has been secured to the flange.

Type CHA consists of a Type CHU Hanger and a bracket to carry 2 or 3 porcelain knobs for wires. Bracket is attached to CHU Hanger with a bolt and nut. Bolt can be loosened and bracket turned to accommodate wires running either parallel with or at right angles to the structural shape.

The thickness of flange as measured about ¾ to 1 inch from the edge may be ⅛ to ½ inch if the pipe is clamped directly against the under side of the flange. If a coupling is so placed as to hold the pipe away from the flange, the thickness of the coupling should be subtracted from the above maximum dimension (½ inch).

Cadmium-galvanized is the standard finish.

Type CHP Hangers



For pipe running parallel with a structural shape.

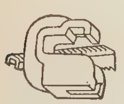
Cat. No.	Each	Size In.	Std. Pkg.
CHP1	$.40	½	100
CHP2	.45	¾	100
CHP3	.50	1	100
CHP4	.55	1¼	100
CHP5	.60	1½	100
CHP6	.65	2	100

Type CHR Hangers

For pipe running at right angles to a structural shape.

Cat. No.	Each	Size In.	Std. Pkg.
CHR1	$.40	½	100
CHR2	.45	¾	100
CHR3	.50	1	100
CHR4	.55	1¼	100
CHR5	.60	1½	100
CHR6	.65	2	100

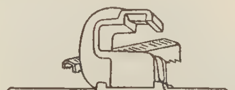
Type CHU Hangers



For suspending a pipe or group of pipes from a structural shape. Takes ½-inch hanger bolt.

CHU1	$.55	100

Type CHA Hangers



For carrying open wires on structural steel work.

Takes 2 Porcelain Knobs		
CHA2	$1.10	50
Takes 3 Porcelain Knobs		
CHA3	$1.50	50

Wedges for Wedgtite Hangers

Cat. No.	Each	Thickness Flange, In.	Std. Pkg.
CHW1	$.20	⅛–½	100
CHW2	.20	¼–⅝	100

T & B Lakin Conduit Hickeys

The shank has a bushed hole into which the end of the conduit enters when a short bend is made at its end or a bend is to be worked down.

The bushed opening in the shank fits snugly over the end of the conduit and protects the threads.

This hickey will not slip on the conduit while a bend is being made. It enables a workman to make bends having different curvatures. It will not kink the pipe when making the shortest practical bends.

Made of malleable iron. Japanned finish.

Cat. No.	Size Pipe Inches	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100	Price Each
335	½	1	10	190	$1.75
336	¾	1	10	220	2.25
337	1	1	2	520	3.25

Allen Improved Pipe Benders

This bender is made of high test steel. Has tempered case hardened teeth which grip in all positions. Has solid jaws, no adjustments; 2-in-1 design with V receiving groove to prevent any contact on inner part of curve, thus preventing mashing, crushing or deforming the pipe. It will bend anything tubular or solid that can be bent cold.

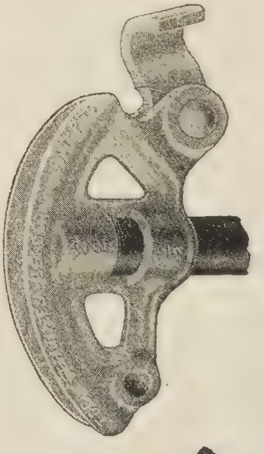
In 2 sizes: Combination of ¼ to ¾ inch inclusive, combination of ¾ to 1¼ inclusive. Side opening. Individually boxed, No. 1 packed 10 boxes in standard package, No. 2 packed 5 in a standard package.

Price, No. 1, Sizes ¼ to ¾ Inch .... each **$6.20**
Price, No. 2, Sizes ¾ to 1¼ Inches .... each **9.00**

Steel City Conduit Benders

Made in 2 forms as listed. Furnished complete with riveted handles. The castings are malleable iron.

Cat. No.	Size In.	Form	Wt. Lbs.	Price Each
900	½	90°	8	$1.50
901	½	45°	8	1.50
902	¾	90°	12	1.50
903	¾	45°	12	1.50



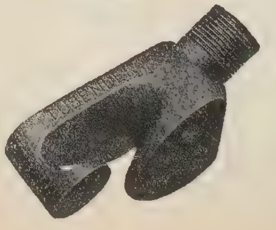
T & B Benders

For Thinwall Conduit

This bender will also bend standard conduit; ½-inch bender will bend ½ and ⅜-inch tubing or ⅜-inch conduit; ¾-inch will bend ¾-inch tubing or ½-inch conduit; 1-inch will bend 1-inch tubing or ¾-inch conduit.

Cat. No.	Each	Size Inches	Std. Pkg.	Carton	Wt. Lbs. Std. Pkg.
4195	$2.50	½,⅜	10	2	25
4196	3.90	¾	10	2	42
4197	5.95	1	2	1	14
*4192	62.50	½, ¾, 1	1	1	68

*No. 4192 is a combination bench bender for ½, ¾ and 1-inch thinwall conduit.



Steeltubes Hickeys

For short bends and tight corners and for stubbing up in concrete work.

Cat. No.	Each	Size In.	Std. Pkg.	Wt. per M
2195	$1.40	½	18	150
2196	2.00	¾	9	275
2197	2.71	1	6	600

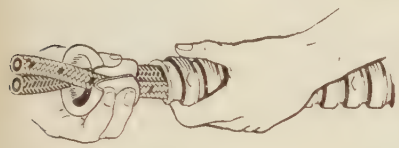
National Flexsteel A.B.C. Cable

Armored Bushed Cable—Double Armored

National Flexsteel A.B.C. Cable with Anti-Short bushing has a moisture-proofed wrapping of Kraft over conductors, instead of an overall braid. Stripping conductors for terminals, Kraft unwinds quickly without use of sharp tools next to conductors, can be broken off by hand, and allows space inside steel for Anti-Short bushing.

Kraft armor strips with a pull—no possible injury to conductors—reduces labor.

Kraft armor unwinds below steel, providing space for Anti-Short bushing.



Anti-Short bushing lays over conductors from the side—a squeeze inserts it inside steel.

Single Strip—1-Conductor

Size B & S Gauge	Per 1000 Feet	Approx. Feet in Coil	Wt., Lbs. 100 Feet
14–1	$57.20	250	168
12–1	62.10	250	192
10–1	66.70	250	200
8–1	73.80	250	236
6–1	93.20	250	320
Single Strip—2-Conductor			
14–2	$44.00	250	248
12–2	64.90	250	272
10–2	88.50	250	340
8–2	144.20	150	647
6–2	206.48	100	720
4–2	320.10	100	910
Single Strip—3-Conductor			
14–3	$65.60	250	284
12–3	86.30	250	360
10–3	112.10	250	410
8–3	177.00	150	635
6–3	250.70	100	880
Single Strip—4-Conductor			
14–4	$107.10	250	348
12–4	131.30	200	420

National A.B.C. Armored Lamp Cord

Single Strip—2-Conductor

18–2	$65.80	250	172
16–2	75.60	250	254
14–2	98.40	250	236

National Anti-Short Bushings

This red fibre Anti-Short Bushing is to be used with A.B.C. Armored Bushed Cable.

All A.B.C. Cable has tied to each coil a bag containing sufficient Anti-Shorts for average use. Extra Anti-Shorts are sold separately as listed below.

Per Bag	For Use with Size Cable	Anti-Shorts per Bag	Bags per Std. Pkg.
$.35	14–2, 14–3, 12–2, 6–1, 4–1	35	30
.35	14–4, 12–3, 12–4, 10–2, 10–3, 2–1	35	30
.40	10–4, 8–2, 8–3, 8–1	20	10
.32	6–2, 6–3	16	10
.32	4–2, 4–3	16	10
.35	14–1, 12–1, 10–1, 8–1	35	10

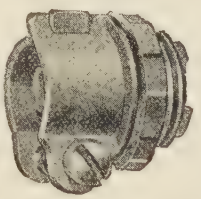
Flexsteel Flexible Conduit

Single Strip

Size In.	Per 1000 Feet	Approx. Feet in Coil	Wt., Lbs. per 1000 Feet
5/16	$42.00	250	160
3/8	54.72	250	180
1/2	74.72	100	520
3/4	99.04	25–50	620
1	208.16	25–50	1180
1 1/4	259.68	25–50	1480
1 1/2	330.56	25	1800
2	424.00	25	2280
2 1/2	496.96	25	2840
3	664.64	25	3000

Flexsteel EZ Hinged Strap Box Connectors

For Armored Cable and Flexible Conduit



EZ Strap is wide, strong and clamps cable more securely and strongly without contortion of cable. This point is particularly advantageous in use with flexible steel conduit.

Peephole is patented.

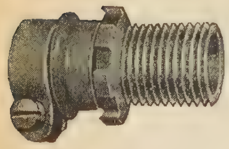
Sherardized finish.

Furnished with bondnuts.

Holds 6-1 armored cable; 8-1 armored lead cable; 18-3, 16-2, 16-3 plain lamp cord; 5/16-inch flexible conduit.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
2222-EZ	$27.00	35/64	27/64	3/8	1/2	25	500	28
Holds 14-1, 12-1, 10-1, 8-1 armored cable; 14-1, 12-1, 10-1 armored lead cable.								
2226-EZ	$18.00	15/32	23/64	21/64	1/2	50	200	18
Holds 14-2, 14-3, 12-2, 12-3, 4-1 armored cable; 6-1 armored lead cable; 14-2, 14-3 plain lamp cord; 3/8 inch flexible conduit.								
2163-EZ	$8.80	41/64	1/2	15/32	1/2	50	500	39
Holds 14-4, 12-3, 12-4, 10-2, 10-3 armored cable; 14-2 armored lead cable.								
2164-EZ	$18.00	11/16	35/64	17/32	1/2	25	100	13
Holds 12-4, 10-3 armored lead cable; 14-2, 14-3, 12-2, 4-1 armored lead cable.								
2165-EZ	$18.00	3/4	37/64	17/32	1/2	50	250	33
Holds 10-4, 8-2, 8-3 armored cable; 14-4, 12-3, 10-2, 10-3 armored lead cable.								
2165-X-EZ	$18.00	55/64	11/16	37/64	1/2	25	100	14
Holds 8-3 armored lead cable; 12-4, 10-3, 10-4 armored lead cable; 1/2-inch flexible conduit.								
2166-EZ	$18.00	15/16	47/64	41/64	1/2	25	100	15
Holds 8-4, 6-2, 6-3 armored cable; 8-2, 8-3 armored lead cable.								
2166-X-EZ	$26.00	1 1/64	51/64	3/4	3/4	25	100	20
Holds 6-3, 6-4, 4-2 armored cable; 8-4, 6-2, 6-3 armored lead cable; 3/4-inch flexible conduit.								
2167-EZ	$26.00	1 1/8	7/8	13/16	3/4	25	100	19
Holds 4-3, 4-4, 2-2 armored cable; 6-3 armored lead cable.								
2167-X-EZ	$42.00	1 7/32	31/32	15/16	1	10	50	15
Holds 4-4, 2-3 armored cable; 6-4, 4-2, 4-3 armored lead cable.								
2168-EZ	$42.00	1 3/8	1 5/64	1	1	10	50	16
Holds 1-inch flexible conduit.								
2169-EZ	$42.00	1 17/32	1 1/8	1 1/32	1	10	50	19
Holds 1 1/4-inch flexible conduit.								
2170-EZ	$60.00	1 25/32	1 1/2	1 9/32	1 1/4	10	50	29
Holds 1 1/2-inch flexible conduit.								
2171-EZ	$86.00	2 1/64	1 3/4	1 1/2	1 1/2	5	50	36
Holds 2-inch flexible conduit.								
2172-EZ	$128.00	2 39/64	2 1/4	2	2	5	20	23
Holds 2 1/2-inch flexible conduit.								
2173-S	$184.00	3 1/16	2 3/4	2 7/16	2 1/2	5	25	41
Holds 3-inch flexible conduit.								
2174-S	$252.00	3 9/16	3 1/4	2 61/64	3	..	5	11

Flexsteel Panel Box Connectors



For Armored Cable and Flexible Conduit

Has extra long neck. Is furnished complete, a finished one piece fitting.

Peephole is patented.

Sherardized finish.

Furnished with bondnuts.

Holds 14-2, 14-3, 14-4, 12-2, 12-3, 10-2, 4-1 armored cable; 14-2, 6-1 armored lead cable; 14-2, 14-3 plain lamp cord; 3/8-inch flexible conduit.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2200-S	$74.00	43/64	9/16	1/2	1/2	20	100	15
Holds 12-4, 10-3 armored cable.								
2201-S	$74.00	25/32	5/8	9/16	1/2	20	100	25
Holds 10-4, 8-2, 8-3, 8-4, 6-2 armored cable; 12-4, 10-2, 10-3, 10-4, 8-2 armored lead cable; 1/2-inch flexible conduit.								
2202-S	$74.00	15/16	23/32	39/64	1/2	20	100	21
Holds 14-3, 6-3, 6-4, 4-2, 4-3, armored cable; 8-4, 6-2,6-3 armored lead cable; 3/4-inch flexible conduit.								
2203-S	$99.00	1 5/32	15/16	3/4	3/4	20	100	27
Holds 4-4 armored cable; 6-4, 4-2, 4-3, 4-4 armored lead cable; 1-inch flexible conduit.								
2204-EZ	$145.00	1 27/64	1 1/8	31/32	1	5	25	13
Holds 1 1/4-inch flexible conduit.								
2205-EZ	$202.00	1 49/64	1 11/32	1 7/32	1 1/4	5	25	19
Holds 1 1/2-inch flexible conduit.								
2206-EZ	$294.00	2 3/64	1 11/16	1 15/32	1 1/2	5	25	23
Holds 2-inch flexible conduit.								
2207-EZ	$406.00	2 17/32	2 3/16	1 31/32	2	5	20	27
Holds 2 1/2-inch flexible conduit.								
2228-S	$592.00	3 3/32	2 11/16	2 13/32	2 1/2	15	25	47
Holds 3-inch flexible conduit.								
2229-S	$712.00	3 17/32	3 1/4	2 61/64	3	..	5	13

No. 2163 Flexsteel Tangent Set Screw Box Connectors

For Armored Cable and Flexible Conduit

An important feature of this connector is the position of the screw which brings great pressure upon the cable with a minimum of crushing of cable. Set screw is usually large.

Peephole is patented.

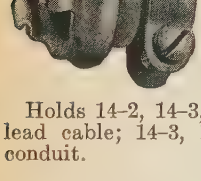
Sherardized finish.

Furnished with bondnuts.

Holds 14–2, 14–3, 12–2, 12–3, 10–2 armored cable; 14–3, 6–1 armored lead cable; 3/8-inch flexible conduit.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2163	$7.20	41/64	1/2	15/32	1/2	50	500	40

Flexsteel Pitcher Lip Box Connectors



For Armored Cable and Flexible Conduit

Desirable for radio connections where wedge method admits of no vibration.

Requires no locknuts.

Peephole is patented.

Sherardized finish.

Holds 14–2, 14–3, 12–2, 4–1 armored cable; 6–1 armored lead cable; 14–3, 14–2 plain lamp cord; 3/8-inch flexible conduit.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
162	$7.20	5/8	17/32	13/32	1/2	50	500	24
Holds 14–2, 14–3, 14–4, 12–2, 12–3, 10–2, 4–1 armored cable; 6–1 armored lead cable; 14–2, 14–3 plain lamp cord; 3/8-inch flexible conduit.								
163	$7.20	43/64	17/32	1/2	1/2	50	500	25

Flexsteel 90 Degree Angle Box Connectors

For Armored Cable and Flexible Conduit

Open back is separate from the cable clamp proper.

Peepholes are patented.

Sherardized finish.

Furnished with bondnuts.

Holds 14-2, 14-3, 12-2, 12-3, 4-1 armored cable; 6-1 armored lead cable; 14-2, 14-3 plain lamp cord; 3/8-inch flexible conduit.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2210-EZ	$28.00	41/64	1/2	15/32	1/2	20	100	19
Holds 14-4, 12-3, 12-4, 10-2, 10-3 armored cable; 14-2, 14-3 armored lead cable.								
2210-X-EZ	$28.00	11/16	35/64	17/32	1/2	20	100	21
Holds 8-3 armored cable; 12-4, 10-3, 10-4 armored cable; 1/2-inch flexible conduit.								
2211-EZ	$39.00	15/16	47/64	41/64	1/2	20	100	24
Holds 6-4, 4-2, 4-3 armored cable; 8-4, 6-2, 6-3 armored lead cable; 3/4-inch flexible conduit.								
2214-SO	$66.00	1 5/32	31/32	3/4	3/4	20	100	42
Holds 4-4 armored lead cable; 1-inch flexible conduit.								
2216-SO	$100.00	1 17/32	1 1/4	1	1	..	20	12
Holds 1 1/4-inch flexible conduit.								
2218-SO	$128.00	1 23/32	1 7/16	1 1/32	1 1/4	..	10	10
Holds 1 1/2-inch flexible conduit.								
2234	$186.00	2 7/64	1 3/4	1 1/2	1 1/2	10	10	17
Holds 2-inch flexible conduit.								
2236	$272.00	2 39/64	2 1/4	2	2	5	5	13
Holds 2 1/2-inch flexible conduit.								
2238	$640.00	3 1/16	2 3/4	2 1/2	2 1/2	5	5	25
Holds 3-inch flexible conduit.								
2240	$852.00	3 9/16	3 1/4	3	3	5	5	33

Flexsteel 45 Degree Angle Box Connectors

For Armored Cable and Flexible Conduit

This is an open back connector that allows for easy fishing with separate cable clamps.

Peephole is patented.

Sherardized finish.

Furnished with bondnuts.

Holds 14–2, 14–3, 12–2, 12–3, 4–1 armored cable; 6–1 armored lead cable; 14–2, 14–3 plain lamp cord; 3/8-inch flexible conduit.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2208-EZ	$28.00	41/64	1/2	15/32	1/2	20	100	14
Holds 14–4, 12–3, 12–4, 10–2, 10–3 armored cable; 14–2 armored lead cable.								
2208-X-EZ	$28.00	11/16	35/64	17/32	1/2	20	100	17
Holds 8–3 armored cable; 12–4, 10–3, 10–4 armored lead cable; 1/2-inch flexible conduit.								
2209-SO	$39.00	15/16	47/64	41/64	1/2	20	100	20
Holds 6–4, 4–2, 4–3 armored cable; 8–4, 6–2, 6–3 armored lead cable; 3/4-inch flexible conduit.								
2215-SO	$66.00	1 5/32	31/32	3/4	3/4	20	100	31
Holds 4–4 armored lead cable; 1-inch flexible conduit.								
2217-SO	$100.00	1 17/32	1 1/4	1	1	..	20	9
Holds 1 1/4-inch flexible conduit.								
2219-SO	$128.00	1 23/32	1 7/16	1 7/32	1 1/4	..	10	7

No. 2226-S Flexsteel Squeeze Type Lamp Cord Connectors

For Armored Cable

Sherardized finish.

Holds 10–1, 8–1 armored cable.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2226-S	$18.00	15/32	13/32	11/32	1/2	50	200	15

Flexsteel Flexible Conduit Couplings

For Flexible Steel Conduit

Sherardized finish.

S.S. (Solid Type) Conduit

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Conduit In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2182	$46.00	17/32	7/16	5/16	25	200	14
2183	54.00	43/64	9/16	3/8	25	100	11
2184	58.00	61/64	13/16	1/2	10	100	24
2185	76.00	1 5/32	1	3/4	10	100	31
2186	102.00	1 7/16	1 3/16	1	5	50	24
2187	138.00	1 53/64	1 1/2	1 1/4	5	50	33
2188	188.00	2 3/32	1 15/16	1 1/2	5	25	19
2189	274.00	2 9/16	2 3/16	2	5	25	28
		S.S. (Split Type) Conduit					
2232	462.00	3 1/16	2 13/16	2 1/2	..	5	12
2233	570.00	3 1/2	3 1/4	3	..	5	15

Flexsteel Rigid to Flexible Conduit Couplings

Larger sizes for one inch and over have heavy EZ Style Clamp.

Peephole is patented.

Sherardized finish.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Size Conduit Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2190-S	$37.00	15/16	23/32	1/2	10	100	16
2191-S	50.00	1 5/32	15/32	3/4	10	100	21
2192-EZ	63.00	1 27/64	1 1/8	1	10	50	20
2193-EZ	88.00	1 49/64	1 11/32	1 1/4	5	50	28
2194-EZ	130.00	2 3/64	1 11/16	1 1/2	5	25	19
2195-EZ	186.00	2 17/32	2 3/16	2	5	25	27
2196-EZ	310.00	3 3/32	2 11/16	2 1/2	5	25	43
2198-S	386.00	3 17/32	3 1/4	3	..	5	11

No. 2175-EZ Flexsteel Duplex Box Connectors

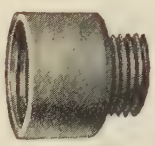
For Armored Cable and Flexible Conduit

Peephole is patented. Sherardized finish. Furnished with bondnuts. Holds 14-2, 14-3, 12-2, 12-3, 4-1 armored cable; 3/8-inch flexible conduit.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2175-EZ	$17.00	41/64	1/2	19/32	1/2	20	100	21

Flexsteel Reducing Nipples

No. 2220-B



No. 2223

These nipples have 3/8 or 1/2-inch female thread to fit various size standard connectors as desired for wiring armored lampcord to standard 1/8 or 3/8-inch key or keyless brass shell or porcelain sockets.

Sherardized finish.

Cat. No.	Per 100	Size Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2220-B	$23.00	3/8 to 1/8	50	500	20
2223	23.00	1/2 to 3/8	50	100	25

No. 2220-EZ-Flexsteel Lamp Cord Connectors

For Armored Cable and Lamp Cord

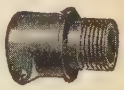
Sherardized finish. Holds 10-1, 8-1, armored cable; 12-1, 10-1, 8-1, armored lead cable; 18-2, 18-3, 16-2 plain lamp cord.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-out In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2220-EZ	$23.00	31/64	3/8	21/64	3/8	50	500	24

Flexsteel Squeeze Type Lamp Cord Connectors

For Armored Cable and Flexible Conduit

Nos. 2220-S and 2222-S



No. 221

Special sizes for special services.

Holds 12-1, 10-1 armored cable; 14-1, 12-1 armored lead cable.

Cat. No.	Per 100	I.D., In. Open	I.D., In. Closed	Wire Throat In.	Knock-Out In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2220-S	$23.00	29/64	3/8	11/32	3/8	50	500	28

Holds 10-1, 8-1 armored cable; 14-1, 12-1, 10-1, 8-1 armored lead cable; 18-2, 18-3, 16-2, 16-3 plain lamp cord; 5/16-inch flexible conduit.

2222-S	$23.00	35/64	7/16	11/32	3/8	50	500	23

Holds 14-1, 12-1, 10-1 armored cable; 14-1, 12-1 armored lead cable; 18-2 plain lamp cord.

2221	$23.00	29/64	5/16	9/32	1/8	50	500	16

T & B Panel Connector Extensions

Can be used with any connector or other fitting having male thread. Makes any connector a panel connector.

Protected against corrosion with Tabolite Superior galvanizing.

To make 3/8-inch panel box connectors use Extension No. 1440 with connectors Nos. 300, 300-V, 240, 240-V, 248, 253, 253-V, 265, 266, 280 or 281.

To make 3/8-inch A panel box connectors use Extension No. 1440 with connectors Nos. 301, 260, 271 or 272.

To make 1/2-inch panel box connectors use Extension No. 1440 with connectors Nos. 302, 241, 254, 323, 267 or 268.

To make 3/4-inch panel box connectors use Extension No. 1441 with connectors Nos. 304, 255, 278, 325, 269, 270 or 279.

To make 1-inch panel box connectors use Extension No. 1442 with connectors Nos. 306, 256, 326, 264, 261 or 273.

To make 1 1/4-inch panel box connectors use Extension No. 1443 with connectors Nos. 308, 257, 262 or 274.

To make 1 1/2-inch panel box connectors use Extension No. 1444 with connectors Nos. 310, 258, 263 or 275.

To make 2-inch panel box connectors use Extension No. 1445 with connectors Nos. 312, 259 or 276.

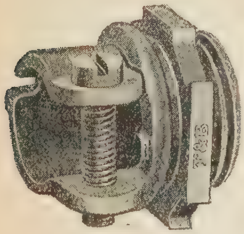
To make 2 1/2-inch panel box connectors use Extension No. 1446 with connectors No. 249 or 330.

Above combinations will hold cables and flexible conduits as shown under description of straight and angle squeeze connectors or straight and angle Tite-Bite connectors.

Cat. No.	Per 100	Size Inches	Thread, Inches Male	Thread, Inches Female	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
1440	$12.50	1/2	1/2	1/2	25	100	12
1441	15.00	3/4	3/4	3/4	100	100	16
1442	25.00	1	1	1	50	50	24
1443	35.00	1 1/4	1 1/4	1 1/4	50	50	32
1444	50.00	1 1/2	1 1/2	1 1/2	50	50	44
1445	75.00	2	2	2	25	25	64
1446	100.00	2 1/2	2 1/2	2 1/2	25	25	84

T & B Squeeze Connectors

For Flexible Steel Conduit and Armored Conductors



Malleable Iron—Galvanized

Locknuts are furnished with connectors without charge except Nos. 250 and 252.

Nos. 250 and 252 have 3/8-inch (pipe size) threaded ends to fit standard sockets.

Nos. 250 and 250A are made to hold 14D solid s.s., 12D solid s.s., 10D solid s.s., 8D solid s.s., 14D solid d.s., 8D solid d.s., 16E s.s., 18E s.s., 16E d.s. and 18E d.s. conductors.

Cat. No.	Per 100	Size In.	Size Knock-out In.	Approx. Opening In.	Approx. Closed In.	Inside Bush. Diam. In.	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100
250	$11.00	1/4	3/8	15/32	3/8	5/16	100	100	4
*250A	12.50	1/4	1/2	15/32	11/32	3/8	50	100	6

Nos. 252 and 252A hold 5/16-inch s.s. and d.s. conduit.

252	$11.00	5/16	3/8	17/32	7/16	3/8	100	100	4
*252A	12.50	5/16	1/2	17/32	7/16	3/8	50	100	6

*Have No. 400 adapter to fit standard 1/2-inch knockout.

Nos. 253 and 253V hold 14W2 s.s., 12W2 s.s., 14W3 s. s., 14W2 d.s., 12W2 d.s., 14W3 d.s., 6D solid s.s., 14E s.s., 14W2 L., 18EM s.s., 16EM d.s., 18EM d.s., 14E d.s.; 3/8-inch s.s., and d.s. conduit.

253	$7.50	3/8	1/2	19/32	1/2	7/16	50	1000	8
†253V	7.50	3/8	1/2	19/32	1/2	7/16	50	1000	8

†Open-mouth visible type, for bushed cables.

No. 248 holds 10W2 s.s., 12W3 s.s., 10W3 s. s., 12W3 d.s.

248	$7.50	3/8L	1/2	21/32	9/16	1/2	50	100	8

No. 260 holds 8W2 s.s., 8W3 s.s., 10W2 d.s., 8W2 d.s., 10W3 d.s.

260	$9.00	3/8A	1/2	13/16	11/16	9/16	50	100	12

No. 254 holds 8W3 d.s., 1/2-inch s.s. and d.s. conduit.

254	$9.00	1/2	1/2	15/16	13/16	19/32	50	100	13

No. 278 holds armored conductors 6W2 s.s., 6W3 s.s.; 6W2 d.s.

278	$15.00	3/4S	3/4	1	7/8	3/4	25	100	20

No. 255 holds 4W2 s.s., 4W2 d.s., 6W3 d.s., 3/4-inch s.s. and d.s. conduit.

255	$15.00	3/4	3/4	1 3/32	15/16	3/4	25	100	21

No. 256 holds 1-inch s.s. conduit.

256	$25.00	1	1	1 3/8	1 1/4	1	25	25	25

No. 261 holds 1-inch d.s. conduit.

261	$25.00	1	1	1 17/32	1 3/8	1	25	25	30

No. 264 holds 4W3 s.s., 2W2 s.s., 4W3 d.s., 2W2 d.s., 6W2L, 6W3L, 4W2L, 4W3L.

264	$25.00	1S	1	1 1/4	1 3/32	1	25	25	26

No. 257 holds 1 1/4-inch s.s. conduit.

257	$35.00	1 1/4	1 1/4	1 21/32	1 1/2	1 5/16	10	10	40

No. 262 holds 1 1/4-inch d.s. conduit

262	$35.00	1 1/4	1 1/4	1 13/16	1 5/8	1 5/16	10	10	45

No. 258 holds 1 1/2-inch s.s. conduit.

258	$50.00	1 1/2	1 1/2	1 7/8	1 11/16	1 1/2	10	10	65

No. 263 holds 1 1/2-inch d.s. conduit.

263	$50.00	1 1/2	1 1/2	2 1/32	1 13/16	1 1/2	10	10	70

No. 259 holds 2-inch s.s. and d.s. conduit.

259	$75.00	2	2	2 1/2	2 5/16	2	10	10	90

No. 249 holds 2 1/2-inch s.s. conduit.

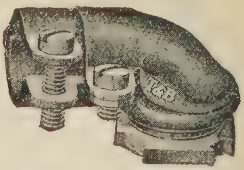
249	$100.00	2 1/2	2 1/2	3	2 13/16	2 3/8	5	5	148

No. 277 holds 3-inch s.s. conduit.

277	$125.00	3	3	3 9/16	3 5/16	3	5	5	180

T & B 45° and 90° Squeeze Connectors

Malleable Iron—Galvanized
For Flexible Steel Conduit and Armored Conductors



The removable cap eliminates fishing wires and enables one to make a quick and sure connection.

Locknuts are furnished.

Holds 14W2 s.s., 12W2 s.s., 14W3 s.s., 14W2 d.s., 12W2 d.s., 14W3 d.s., 6D solid s.s., 14E s.s., 14W2L, 18EM s.s., 16EM d.s., 18EM d.s., 14E d.s.; 3/8-inch s.s. conduit, 3/8-inch d.s. conduit; 12W3 s.s.

Cat. No.	Size Inches	Size Knock-out In.	Approx. Open In.	Approx. Closed In.	Inside Bush. Diam. In.	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100	Price per 100
265	3/8–45°	1/2	5/8	1/2	9/16	50	100	14	$16.00
266	3/8-90°	1/2	5/8	1/2	9/16	50	100	16	16.00
Holds 12W3 d.s., 10W2 s.s., 10W3 s.s.									
280	3/8–90° Large	1/2	11/16	17/32	9/16	50	100	14	$16.00
Holds 8W2 s.s., 8W3 s.s., 10W2 d.s., 8W2 d.s., 10W3 d.s.									
272	3/8A–90°	1/2	13/16	11/16	9/16	50	100	15	$20.00
Holds 8W3 d.s., 1/2-inch s.s. and d.s. conduit.									
267	1/2–45°	1/2	15/16	13/16	9/16	25	100	22	$20.00
268	1/2–90°	1/2	15/16	13/16	9/16	25	100	22	20.00
Holds 6W2 s.s., 6W3 s.s., 6W2 d.s.									
279	3/4S–90°	3/4	1	7/8	3/4	25	50	25	$40.00
Holds 4W2 s.s., 4W3 s.s., 4W2 d.s., 6W3 d.s.; 3/4-inch s.s. conduit.									
269	3/4–45°	3/4	1 1/8	1	25/32	25	50	22	$40.00
270	3/4–90°	3/4	1 1/8	1	25/32	25	50	28	40.00
Holds 2W2 s.s., 2W2 d.s., 4W3 d.s.; 1-inch s.s.									
273	1 –90°	1	1 13/32	1	...	..	25	50	$60.00
Holds 1 1/4-inch s.s. conduit.									
274	1 1/4–90°	1 1/4	1 21/32	1 3/8	1 1/4	..	10	100	$75.00
Holds 1 1/2-inch s.s. conduit.									
275	1 1/2–90°	1 1/2	1 7/8	1 5/8	1 1/2	..	10	165	$100.00
Holds 2-inch s.s. and d.s. conduit.									
276	2 –90°	2	2 1/2	2 1/4	2	..	5	250	$150.00

T & B Squeeze Type Connectors

For Non-Metallic Sheathed Cable and Flexible Tubing

Each connector has an insert so held in place that it cannot be displaced; can be removed without taking out and replacing screw. Has threaded ends, with locknuts. Malleable iron connector, insert steel galvanized.

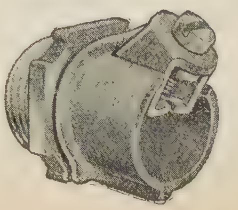
Cat. No.	Knock-out In.	Made to Hold: With Insert	Made to Hold: Insert Removed	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100	Price per 100
2005	1/2	14W2, 12W2	14W3, 12W3	50	100	8	$8.50
2006	1/2	10W2	10W3	50	100	13	10.00
2007	3/4	10W2	10W3	25	100	15	16.00
2008	3/4	8W2	8W3	25	100	13	16.00
2009	1	6W2	6W3	..	50	20	30.00

No. 239 T & B 3/8-Inch Wedge Type Duplex Box Connectors

Fits in a standard 1/2-inch k.o. and takes 14W2, 14W3, 12W2, 12W3.

Standard package, 100. Weight per 100, 15 pounds.

Price, No. **239** ....per 100 **$10.00**



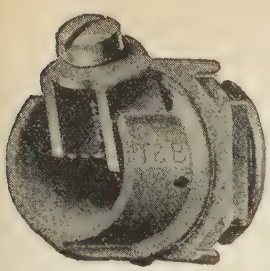
No. 3100 T & B Tite-Bite Box Connectors

Has corrugated grip and holds non-metallic sheathed cable without cutting the fabric of the cable sheath.

Holds 14W2, 14W3, 12W2, 12W3.

Cat. No.	Per 100	Size In.	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
3100	$7.50	3/8	50	1000	9

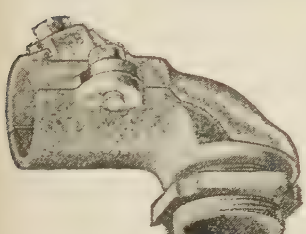
T & B Straight Tite-Bite Connectors



No. 300 holds s.s., 14-2, 14-3, 12-2, 12-3, 10-2, 4-1, 6-1; d.s., 4-1, 6-1, 12-2, 12-3, 14-2, 14-3, s. s. lead 8-1, 14-2, 14-3; d.s. lead 6-1; flexible conduit s.s. 3/8 inch; d.s. 3/8 inch; lamp cords 14-2, 16-2, 16-3, 18-3, lamp cords reinforced s.s. 16-2, 18-2; d.s. 14-2, 16-2, 18-2 and other special sizes.

Cat. No.	Per 100	Size In.	Size K.O. In.	Approx. Open-ing In.	Approx. Closed In.	Inside Bushed Diam. In.	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100
300	$7.50	3/8	1/2	.656	.437	1/2	..	1000	8.5
No. 300-V takes the same sizes of cables as the No. 300. Visible type for bushed cable.									
300-V	$7.50	3/8	1/2	.656	.437	1/2	..	1000	8.5
No. 301 holds s.s. 10-3, 8-2, 8-3; d.s. 10-2 10-3, 8-2; s.s. lead 14-2, 14-3, 12-2, 12-3, 10-2, 10-3; d.s. lead 14-2, 14-3, 12-2, 12-3, 10-2, 4-1 and others.									
301	$9.00	3/8	1/2	.781	.625	17/32	..	100	16
No. 302 holds s.s. 10-4, 8-3; d.s. 10-4, 8-3; s.s. lead 8-2, 8-3; d.s. lead 10-3, 12-4, 12-3, 10-2, 4-1; flexible conduit 1/2 inch, s.s. and 1/2 inch d.s.									
302	$9.00	1/2	1/2	.937	.750	19/32	..	100	16
No. 304 holds s.s. 8-3, 6-2, 6-3, 4-2, 4-3; d.s. 6-2, 6-3, 4-2, s.s. lead 6-2, 6-3; flexible conduit 3/4 inch s.s. and 3/4 inch d.s., 6-3 service entrance cable.									
304	$15.00	3/4	3/4	1.093	.906	49/64	..	100	26
No. 306 holds s.s. 4-4, 2-2; d.s. 4-4, 4-3, 2-2; s.s. lead 4-2, 4-3, flexible conduit 1 inch s.s. and 1 inch d.s.									
306	$25.00	1	1	1.468	1.250	1	..	25	36
No. 308 holds flexible conduit 1 1/4 inch s.s. and d.s.									
308	$35.00	1 1/4	1 1/4	1.750	1.562	1 1/4	..	10	60
No. 310 holds flexible conduit 1 1/2 inch s.s. and d.s.									
310	$50.00	1 1/2	1 1/2	2.031	1.812	1 1/2	..	10	90
No. 312 holds flexible conduit 2 inch s.s. and d.s.									
312	$75.00	2	2	2.500	2.250	2	..	10	130

T & B Angle Tite-Bite Connectors



No. 321 holds s.s. 14-2, 14-3, 12-2, 12-3, 10-2, 4-1, 6-1; d.s. 4-1, 6-1, 12-2, 12-3, 14-2, 14-3; s.s. lead 8-1, 14-2, 14-3, d.s. lead 6-1; flexible conduit s.s. 3/8 inch; d.s. 3/8 inch; lamp cords 14-2, 16-2, 16-3, 18-3; lamp cords reinforced s.s. 16-2, 18-2; d.s. 14-2, 16-2, 18-2 and other special sizes.

Cat. No.	Per 100	Size In.	Size K.O. In.	Approx. Open-ing In.	Approx. Closed In.	Inside Bushed Diam. In.	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100
321	$16.00	3/8	1/2	.656	.437	1/2	50	100	18
No. 322 holds s.s. 10-3, 8-2, 8-3; d.s. 10-2, 10-3, 8-2; s.s. lead 14-2, 14-3, 12-2, 12-3, 10-2, 10-3; d.s. lead 14-2, 14-3, 12-2, 12-3, 10-2, 4-1; and others.									
322	$20.00	3/8A	1/2	.781	.625	17/32	50	100	27
No. 323 holds s.s. 10-4, 8-3; d.s. 10-4, 8-3; s.s. lead 8-2, 8-3; d.s. lead 10-3, 12-4, 12-3, 10-2, 4-1; flexible conduit 1/2 inch s.s. and 1/2 inch d.s.									
323	$20.00	1/2	1/2	.937	.750	19/32	50	100	29
No. 325 holds s.s. 8-3, 6-2, 6-3, 4-2, 4-3; d.s. 6-2, 6-3, 4-2, s.s. lead 6-2, 6-3; flexible conduit 3/4 inch s.s. and 3/4 inch d.s., 6-3 service entrance cable.									
325	$40.00	3/4	3/4	1.093	.906	49/64	50	50	34
No. 326 holds s.s. 4-4, 2-2; d.s. 4-4, 4-3, 2-2; s.s. lead 4-2, 4-3; flexible conduit 1 inch s.s. and 1 inch d.s.									
326	$60.00	1	1	1.468	1.250	1	25	25	60
No. 327 holds flexible conduit 1 1/4 inch s.s. and d.s.									
327	75.00	1 1/4	1 1/4	1.750	1.562	1 1/4	10	10	110
No. 330 holds flexible conduit 2 1/2 inch s.s. and d.s.									
330	$225.00	2 1/2	2 1/2	....	....	2 1/2	5	5	500
No. 331 holds flexible conduit 3 inch s.s. and d.s.									
331	$262.50	3	3	....	....	3	5	5	650

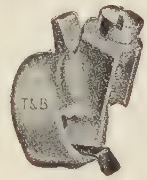
T & B Squeeze Combination Couplings

Malleable Iron—Galvanized

For connecting flexible and rigid metallic conduits, also for connecting flexible metallic conduit to outlet boxes by means of Chase nipple. One-piece malleable iron, galvanized. Cannot pull apart.

Cat. No.	Per 100	Size In.	Made to Hold	Unit Pkg.	Std. Pkg.	Wt. Lbs. per 100
230	$15.00	1/2	1/2″ S.S. and D.S. Conduit 6W2 S.S.; 8W3 and 6W2 D.S.	10	100	18
231	20.00	3/4	3/4″ S.S. and D.S. Conduit; 4W2, 6W3 and 4W3 S.S.; 4W2 and 6W3 D.S..	10	100	25
232	25.00	1	1″ S.S. Conduit; 2W2 S.S. and D.S..	10	50	35
233	35.00	1 1/4	1 1/4″ S.S. Conduit........	10	50	40
234	50.00	1 1/2	1 1/2″ S.S. Conduit........	50	50	76
235	75.00	2	2″ S.S. and D.S. Conduit..	50	50	92
236	75.00	2 1/2	2 1/2″ S.S. and D.S. Conduit.	5	25	180
237	100.00	3	3″ S.S. Conduit..........	1	5	240

T & B Slip-In Connectors



For machine and appliance installations as well as house wiring.

The Tite-Bite grip has teeth spaced to just fit the convolutions of the cable. The design of the grip prevents the teeth from entering between or spreading the convolutions, and the screw cannot touch the armor.

With Tite-Bite Grip

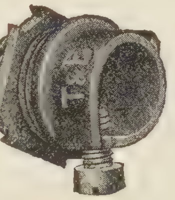
Cat. No.	Per 100	Size In.	Made to Hold	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
A1S	$7.50	3/8	14W2, 14W3, 12W2, 14C and 14P Cord; 5/16″ Flex. Cond.	50	1000	5
*A1S-V	7.50	3/8		50	1000	5

*Visible type.

Set Screw Type

Cat. No.	Per 100	Size In.	Made to Hold	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
A14S	$9.00	5/16	No. 18 Single; 5/16″ S.S.; No. 14 Bare Neutral...	100	100	4
A18S	9.00	..	1/4″ S.S., 18E and 16E Cord; No. 14 Bare Neutral...	100	100	4

T & B Inclined Set Screw Connectors



The screw is on the right-hand side, making it easy to tighten.

Nos. 240 and 240-V are made to hold Nos. 14W2, 14W3, 12W2, 12W3, 10W2, 10W3, 3/8-inch S.S. conduit, 3/8-inch D.S. conduit.

No. 241 is made to hold Nos. 8W2, 8W3, 10W2L, 8W2L, 10W3L, 1/2-inch S.S. conduit, 1/2-inch D.S. conduit.

Cat. No.	Per 100	Size Inches	Size Knockout Inches	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
240	$7.50	3/8	1/2	50	1000	8
*240-V	7.50	3/8	1/2	50	1000	8
241	9.00	1/2	1/2	50	100	14

*Open-mouth, visible type, for bushed cables.

T & B 2020 Type Connectors

For 14W2, 14W3, 12W2, 12W3, 10W2, and 10W3 non-metallic sheathed cable, also 7/32, 1/4, and 3/8-inch flexible fibre tubing.

Can be installed outside or inside box. Simply snap connector into knockout, insert cable or tubing and tighten down screw. Has no rough edges or projections to cut into fibre armor. At same time they protect armor from rough edges of knockout opening. Present long rounded bearing surfaces to armor, doing away with possibility of injury to cable. Present nicely rounded shoulders to conductors as they are bent up to the outlet.

Cat. No.	Per 100	Size Inches	Knockout Inches	Unit Pkg.	Std. Pkg.	Wt., Lbs. per 100
2020	$7.50	3/8	1/2	50	1000	3 1/2

National Ovalflex A.B.C. Flat Armored Bushed Cable

2-Conductor

A safely bushed and insulated flat armored cable for underplaster installations and alterations. Its neat appearance recommends it for exposed surface wiring, and easy bending edgewise or flatwise makes it suitable for fitting snugly into corners and around machinery.

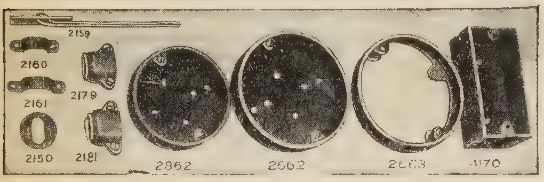
3-Conductor

Anti-Short dependable bushes cut end of steel armor, preventing damage to wires.

Regularly made with solid conductors and N. E. Code insulation, but can be furnished with stranded conductors or special insulation.

Size B. & S. Gauge	14/2	12/2	10/2	14/3	12/3
Per 1000 Feet	**$63.00**	**92.00**	**124.00**	**90.00**	**122.00**
Feet per Coil	250	125	125	125	125
Wt., Lbs., 1000 Ft.	248	280	352	348	378

Ovalflex Fittings



No.	Description	Per 100
2176A	Set Screw Connector for 14-2 and 12-2 Ovalflex to ½-Inch Threaded Fittings or Boxes with ½-Inch K. O.'s	**$12.00**
2180	Same as 2176A but Squeeze Type for 14-3 and 12-3 Ovalflex.	**12.00**
9050S	Squeeze Connector for 14-2 and 12-2 Ovalflex to ½-Inch Threaded Fittings or Boxes with ½-Inch K. O.'s	**6.98**
2154	Set Screw Connector for 14-2, 12-2 and 10-2 Ovalflex to Boxes Having ⅝-Inch and 23/32-inch K. O.'s and Cable Clamps	**12.00**
412	Connector for 14-2, 12-2 and 10-2 Ovalflex to Metal Molding Devices	**20.00**
413	Same as 412 but for 14-3 and 12-3 Ovalflex	**24.00**
2155	90° Box Connector; Takes 14-2 and 12-2 Ovalflex into ½-Inch Conduit K. O.'s	**28.00**
2156	Same as 2155 but for 14-3, 12-3 and 10-2	**28.00**
2157	1-Screw Folding Strap for 14-2, 12-2 and 10-2	**1.00**
2159	Toggle Fastener with Wire Loop	**2.40**
2160	Strap Fastener for 14-2 and 12-2 Ovalflex	**.80**
2161	Strap Fastener for 14-3 and 12-3 Ovalflex	**1.00**
2662	Outlet Box, 4x¾ Inches Outside, 6 Oval K. O.'s in Side; 5½-Inch Conduit K. O.'s in Bottom	**16.80**
2665	Same as 2662 but with ⅜-Inch Fixture Stud	**22.80**
2663	Extension or Plaster Ring, 4x¾ Inches Outside with 6 Oval K.O.'s for Connecting Ovalflex to Boxes Buried in Walls and Ceilings	**16.50**
2862	Outlet Box, 3¼x¾ Inches Outside, 4 Oval K.O.'s in Side; One ½-Inch Conduit K.O. in Bottom	**15.60**
2865	Same as 2862, but with ⅜-Inch Fixture Stud.	**21.80**
***4170S1**	Sectional Switch Box, 4x1 13/16x1½ Inches Deep; 1 Oval K.O. in Each End; 2 Oval K.O.'s in One Side; 1½-Inch and 1 23/32 K.O. on Opposite Side; ½-Inch K.O. in Bottom. Sherardized. Takes Connectors 2179 and 2181	**31.50**
***4172S1**	Spacer (Box Less Sides) for Forming Gangs	**27.90**
2179	Special Box Connector to Take 14-2, 12-2 and 10-2 Ovalflex into Oval K.O.'S	**7.00**
2181	Same as 2179, but for 14-3 and 12-3 Ovalflex	**7.00**
2150	Adapter Bushing for Use with Connectors 2179 and 2181 in ½-Inch Conduit K.O.'s	**1.20**

*These boxes and spacers can be equipped with the usual supporting ears but because of the length of box, 4 inches, an ordinary switch plate will not cover the ears.

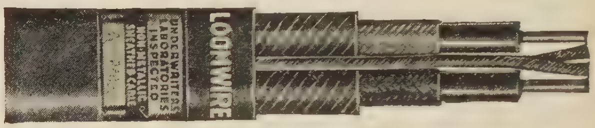
Flextube Non-metallic Flexible Conduit

Made from an especially prepared stiff fiber cord interwoven with a tough yarn. The result is a seamless tube with a smooth, hard, canvas-like roller-bearing interior which affords the best obtainable fishing surface. This interwoven insulating tubing is then treated with a superior moisture and flame resisting compound, is further protected by a strong, tough braiding which is also compounded.

Regularly inspected and labeled by the Underwriters' Laboratories.

Inside Diam., In.	Feet to Coil	Wt., Lbs. per 1000 Ft.	Price per Ft.	Inside Diam., In.	Feet to Coil	Wt., Lbs. per 1000 Ft.	Price per Ft.
7/32	250	42	**$.03**	**1**	100	160	**$.21**
¼	250	45	**.04**	**1¼**	100	205	**.23**
⅜	250	61	**.06**	**1½**	100	245	**.35**
½	200	83	**.08**	**1¾**	50	425	**.37**
⅝	200	102	**.10**	**2**	50	460	**.42**
¾	150	115	**.12**	**2¼**	50	700	**.44**
				2½	50	740	....

LoomWire Non-Metallic Sheathed Cable

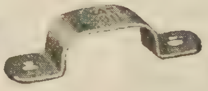


14/2 Duplex LoomWire

Size of Cable	Feet per Coil	Weight, Pounds Per 1000 Feet	Size of Cable	Feet per Coil	Weight, Pounds Per 1000 Feet
14/2	250	104	**14/3**	200	165
12/2	200	125	**12/3**	200	200
10/2	200	155	**10/3**	200	250
8/2	125	240	**8/3**	125	400

LoomWire Fittings

No. 9000



No. 9011

No. 9012

Cat. No.	Description	Std. Pkg.	Weight Pounds Std. Pkg.
9000	Clip for Open Wiring 14/2 and 12/2	500	8½
9011	Strap for Concealed Wiring 14/2 and 12/2.	1000	7
9012	Strap for Concealed Wiring 14/3 and 12/3.	1000	7¾

Connectors

A ½-inch connector for use with duplex or triplex LoomWire. Take out bushing or shim to use triplex LoomWire.

Nos. 9050S, 9052S, 9054S and 9056S

Cat. No.	With Shim Holds	Without Shim Holds	K.O. In.	Std. Pkg.	Wt. Lbs. Std. Pkg.
9050S	14/2, 12/2	14/3, 12/3	½	500	43¾
9052S	10/2	10/3	½	100	12½
9054S	8/2	8/3	¾	100	17½
9056S	6/2	6/3	1	100	29½

Prices upon application.

No. 2163-EZ Box Connectors

For 14/2, 12/2, 14/3 and 12/3 loomwire.

Standard package quantity, 1000.

Weight per 1000, 78 pounds.

No. **2163-EZ** ....per 100 **$8.80**

National Metal Molding and Fittings

CAT. NO.	DESCRIPTION	UNIT PKG.	STD. PKG.	EACH
333	NATIONAL METAL MOLDING	100 FT.	1000 FT.	$ .12 Ft.
336	90° FLAT ELBOW	5	100	.15
437	45° FLAT ELBOW	5	100	.20
337	EXTERNAL ELBOW	5	100	.15
338	INTERNAL ELBOW	5	100	.15
337-B	EXTERNAL ELBOW COVER	30	30	.10
338-B	INTERNAL ELBOW COVER	30	30	.10
319	TAKE-OFF TEE	5	100	.20
376	CORNER BOX	5	50	.44
348	2½" DIA. DROP CORD ROSETTE	5	50	.35
348-X	3" DIA. DROP CORD ROSETTE	5	50	.35
430	2½" FIXTURE ROSETTE	5	50	.65
400	2½" DIA. RECEPTACLE BASE	5	50	.70
400-X	3" DIA. RECEPTACLE BASE	5	50	.70
356-X	3" DIA. KEYLESS RECEPTACLE	5	50	.80
357	2½" DIA. KEYLESS RECEPTACLE	5	50	.60
360	2½" DIA. PLUG RECEPTACLE	5	50	.80
360-X	3" DIA. PLUG RECEPTACLE	5	50	.95
340-X	TERMINAL BLOCK	10	50	.20
339-X	2½" COMBINATION PLATE	5	100	.15
343	2½" DIA. 5 AMP. DEVICE BOX	5	50	.40
342	3" DIA. 10 AMP. DEVICE BOX	5	50	.40
361	4¾" CANOPY BASE PLATE AND COVER	5	50	.60
362	4¾" CANOPY BASE PLATE AND COVER	5	50	.60
365	4½" DIA. FIXTURE BOX	5	50	.60

National Metal Molding and Fittings

CAT. NO.	DESCRIPTION	UNIT PKG.	STD. PKG.	EACH
365-A	4½" DIA. FIXTURE BOX WITH ⅜" STUD	5	50	$ .70
365-X	4" COMBINATION PLATE	5	100	.15
366	6½" DIA. FIXTURE BOX	5	20	.90
367	6½" SPLIT CANOPY BASE AND COVER	5	20	1.00
438	1-GANG SEMI-FLUSH SWITCH BOX	1	10	1.00
439-X	1-GANG SURFACE [illegible]H BOX-1" DEEP	1	10	.60
440-X	2-GANG SURFACE SWITCH BOX-1" DEEP	1	10	1.05
439-D	1-GANG SURFACE SWITCH BOX-1⅜" DEEP	1	10	.70
440-D	2-GANG SURFACE SWITCH BOX-1⅜" DEEP	1	10	1.20
439	1-GANG SURFACE SWITCH BOX-1¾" DEEP	1	10	.70
440	2-GANG SURFACE SWITCH BOX-1¾" DEEP	1	10	1.20
441	1-GANG SWITCH BOX ADAPTER	1	10	.65
442	2-GANG SWITCH BOX ADAPTER	1	10	1.20
2180	½" STRAIGHT BOX CONNECTOR	10	100	.20
315	½" CONDUIT TO METAL MOLDING CONNECTOR	5	20	.35
316	90° ½" CONDUIT COUPLING	5	20	.30
317	90° ½" BOX CONNECTOR	5	20	.30
369-X	OPEN WORK COUPLING	5	20	.40
406	COMBINATION CONNECTOR	5	20	.25
344-X	COUPLING	50	500	.02
345	SINGLE STRAP	50	500	.02
414-S	CONNECTOR FOR ROUND ARMORED CABLE	10	10	.25
323	JOINT CAP	50	500	.02
355	GROUND CLAMP	5	100	.10
422-X	333 MOLDING SHEAR	1	1	8.00

3-Wire Ovalduct

Ovalduct is a flat raceway made for extension work on walls and ceilings or fireproof buildings. It is a rigid tube formed from sheet steel.

In making wiring alterations with ordinary materials much time is lost channelling deep grooves in tile, concrete, or brick surfaces to receive the raceway; and cutting tile floor arches seriously affects their strength. Ovalduct is installed without grooving or channelling the underlying concrete, tile or brick. In new work it is fastened in place and plastered over; in old work, it is laid in a groove cut only in the plaster, and covered by plaster patching.

The Ovalduct line includes elbows, couplings, boxes and connectors which will take care of any wiring requirement and permit it to be installed in conjunction with any other raceway or wiring system.

Ovalduct is furnished in 10-foot lengths and has an oval cross section $1\frac{3}{32}$-inch high and $3\frac{1}{32}$-inch wide.

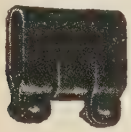
Standard package, 100 feet.

Weight per 100 feet, 35 pounds.

Per 100 Feet..... **$9.00**

Fittings for 3-Wire Ovalduct

Squeeze Type Couplings



For Ovalduct and elbows. Length, $1\frac{1}{4}$ inches.

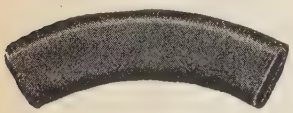
Cat. No.	Per 100	Unit Pkg.	Std. Pkg.	Wt. Lbs. Std. Pkg.
2133	$7.30	50	200	13

90° Internal Elbows

Radius $1\frac{1}{4}$ inches. Offset, back to end, approximately $2\frac{1}{2}$ inches. Fits coupling 2133 and connectors 2156, 401 and 2181.

2134	$18.00	25	100	16

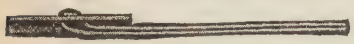
45° Flat Elbows



Radius 3 inches. Length approximately $3\frac{1}{2}$ inches. Fits coupling 2133 and connectors 2156, 401, 2181.

2135	$13.20	25	100	12

Wire Toggle Fasteners



2159	$1.45	50	500	12

Strap Fasteners

2161	$.60	50	500	4

Box Connectors with ½-Inch Locknut

Takes Ovalduct into conduit or ½-inch knockouts.

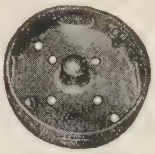
Cat. No.	Per 100	Unit Pkg.	Std. Pkg.	Wt. Lbs. Std. Pkg.
2180	$7.20	10	20	3

Outlet Boxes

Size, $3\frac{1}{4}$x$3\frac{1}{4}$ inches.

Has 4 oval knockouts in side; one ½-inch conduit knockout in bottom.

2862	$9.35	5	50	18



Same as 2862 but has $\frac{3}{8}$-inch fixture stud.

2865	$13.10	5	50	21

90° Box Connectors

Takes Ovalduct into conduit or ½-inch knockouts.

2156	$16.80	10	100	25

No. 111 Metal Xtensionduct

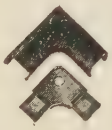
A simple method of circuit extension in place of cords. Finished in neutral brown mahogany to match oak, birch, walnut or mahogany woodwork.

For extension wiring from existing convenience outlet. Takes two No. 14 wires. Furnished in 5-foot lengths.

No. 111, Unit Package (100 Feet).....per 100 feet **$8.30**

No. 111, Standard Package (1000 Feet)...per 100 feet **7.50**

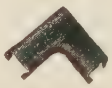
No. 111 Metal Xtensionduct Fittings



Flat Elbow Complete

For use at left or right bends in Xtensionduct; 90°. Supplied with base.

Cat. No.	Per 100 Unit Pkg.	Per 100 Std. Pkg.	Unit Pkg.	Std. Pkg.
136-C	$15.00	$13.50	5	50



Flat Elbow Cap

For use at left or right bends in Xtensionduct; 90°.

136	$7.80	$7.00	5	50

Flat Elbow Base

Base for No. 136.

136-B	$7.20	$6.50	5	50

External Elbow Cap

For use at outside corners; 90°.

137	$7.80	$7.00	5	50

Internal Elbow Cap

For use at inside corners; 90°.

138	$7.80	$7.00	5	50

Baseboard Offset Elbow

For runs from outlet on baseboard to right angle runs on plaster just above baseboard. Supplied with base.

176	$15.00	$13.50	5	50

Low Potential Fibre Bushing

Used where Xtensionduct is used without fittings for covering bell or signal wire.

100	$2.90	$2.60	10	100

Coupling

For connecting base. Capping may overlap joint. (If coupling is not used capping of Xtensionduct must overlap joint in base to provide electrical cotinuity.)

144	$4.30	$3.90	10	100

Box Extension Adapter

Accommodates extensions from outlets requiring other than standard convenience receptacles. May be used with any standard wiring device including the P & S Despard Line.

Cat. No.	Per 100 Unit Pkg.	Per 100 Std. Pkg.	Unit Pkg.	Std. Pkg.
139	$45.10	$40.60	10	100

Box Extension Device

Accommodates extension from existing outlet. Includes plate and receptacle.

141	$68.80	$61.90	10	100

Duplex Receptacle Unit

Duplex receptacle and bakelite housing for surface mounting.

150	$68.80	$61.90	10	100

Cutting and Notching Gauge

Mitre gauge; assures close and neat fitting joints and corners.

	Each	Each		
122	$1.40	$1.40	1	1

No. 500 Wiremold

Capacity Single Conductor		Capacity Twisted Pair
1—No. 8	*2—No. 14	1—No. 16
2—No. 10	6—No. 16	1—No. 18
2—No. 12	6—No. 18	1—No. 19

*No. 500 Wiremold is designed for installations requiring circuits of two and short runs of three wires.

Furnished in 10-foot lengths.

Weight per 1000 feet, 320 pounds.

No. **500**.....per foot **$.12**

No. 700 Wiremold

Capacity Single Conductor		Capacity Twisted Pair
1—No. 6	4—No. 14	2—No. 16
2—No. 8	10—No. 16	2—No. 18
3—No. 10	10—No. 18	2—No. 19
*4—No. 12		

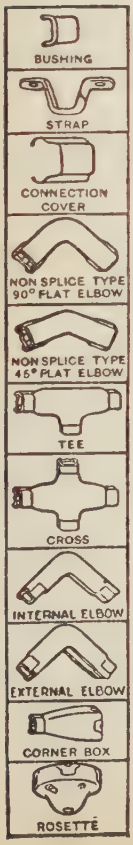
*No. 700 Wiremold is designed for installations requiring circuits of four wires. Where local approval can be obtained four No. 12 wires may be fished in straight runs if a pull box is used every 30 feet.

Furnished in 10-foot lengths.

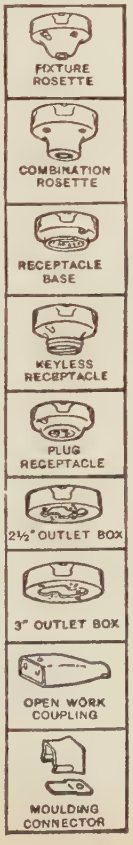
Weight per 1000 feet, 360 pounds.

No. **700**.....per foot **$.14**

No. 500 Series Wiremold Fittings



Package	Quantity	Per 100
No. 502		
Std.	200	**$2.00**
Unit	50	**3.00**
No. 504		
Std.	500	**$1.10**
Unit	50	**2.00**
No. 506		
Std.	200	**$1.20**
Unit	50	**2.00**
No. 511		
Std.	100	**$14.00**
Unit	5	**16.00**
No. 512		
Std.	50	**$16.50**
Unit	5	**20.00**
No. 515		
Std.	100	**$21.00**
Unit	5	**24.00**
No. 516		
Std.	50	**$34.30**
Unit	5	**38.00**
No. 517		
Std.	100	**$17.70**
Unit	5	**22.00**
No. 518		
Std.	100	**$15.30**
Unit	5	**18.00**
No. 519		
Std.	50	**$42.40**
Unit	5	**48.00**
No. 521		
Std.	50	**$32.00**
Unit	5	**36.00**

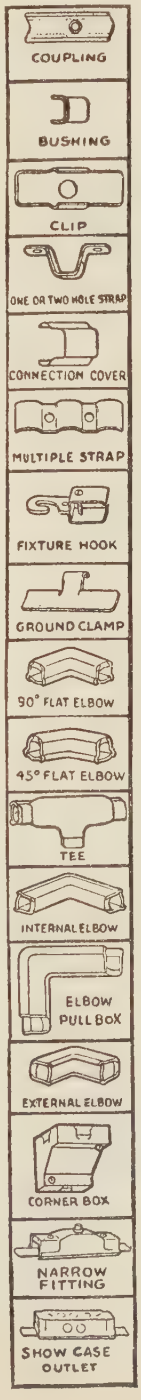


Package	Quantity	Per 100
No. 523		
Std.	50	**$70.60**
Unit	5	**80.00**
No. 524		
Std.	50	**$54.10**
Unit	5	**62.00**
No. 525		
Std.	50	**$70.90**
Unit	5	**78.00**
No. 526		
Std.	50	**$82.00**
Unit	5	**90.00**
No. 527		
Std.	50	**$82.00**
Unit	5	**90.00**
No. 532		
Std.	20	**$40.00**
Unit	5	**46.00**
No. 533		
Std.	20	**$40.00**
Unit	5	**46.00**
No. 588		
Std.	20	**$34.30**
Unit	5	**38.00**
No. 599		
Std.	100	**$3.50**
Unit	4	**4.00**

No. 5700 and 700 Series Wiremold Fittings

Fittings listed below having catalogue numbers beginning with 57 are for use with either No. 500 or No. 700 Wiremold.

Use No. 500 series elbows with No. 500 Wiremold. They cost less and make a neater job.



Package	Quantity	Per 100
No. 5701		
Std.	200	**$1.60**
Unit	50	**2.00**
No. 702		
Std.	200	**$2.00**
Unit	50	**3.00**
No. 5703		
Std.	500	**$2.30**
Unit	50	**3.00**
No. 704		
Std.	500	**$1.90**
Unit	50	**2.00**
No. 706		
Std.	200	**$1.20**
Unit	50	**2.00**
No. 5707		
Std.	200	**$4.70**
Unit	50	**5.00**
No. 5708		
Std.	100	**$17.20**
Unit	10	**19.00**
No. 5709		
Std.	100	**$8.20**
Unit	5	**9.00**
No. 5711		
Std.	100	**$17.20**
Unit	10	**19.00**
No. 5712		
Std.	50	**$18.80**
Unit	5	**21.00**
No. 5715		
Std.	100	**$26.00**
Unit	5	**28.00**
No. 5717		
Std.	100	**$20.60**
Unit	10	**23.00**
No. 5717-A		
Std.	50	**$45.70**
Unit	10	**50.00**
No. 5718		
Std.	100	**$18.30**
Unit	10	**20.00**
No. 5719		
Std.	50	**$47.10**
Unit	5	**54.00**
No. 5720		
Std.	50	**$48.00**
Unit	5	**54.00**
No. 5720-A		
Std.	50	**$51.80**
Unit	5	**58.00**

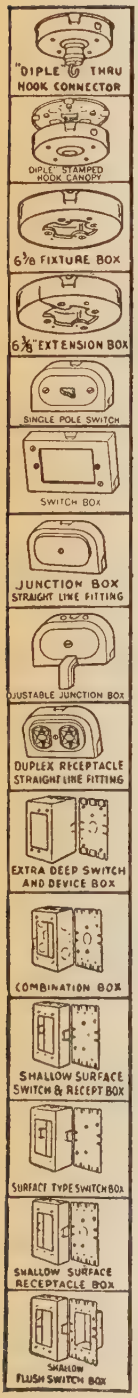
Package	Quantity	Per 100
No. 5721		
Std.	100	**$32.00**
Unit	5	**36.00**
No. 5724		
Std.	50	**$58.80**
Unit	5	**68.00**
No. 5725		
Std.	100	**$70.90**
Unit	5	**78.00**
No. 5726		
Std.	100	**$82.00**
Unit	5	**90.00**
No. 5727		
Std.	100	**$82.00**
Unit	5	**90.00**
No. 5728		
Std.	100	**$43.50**
Unit	10	**50.00**
No. 5729		
Std.	100	**$43.50**
Unit	10	**50.00**
No. 5730		
Std.	100	**$18.30**
Unit	20	**20.00**
No. 5731		
Std.	100	**$11.50**
Unit	5	**13.00**
No. 5732		
Std.	100	**$38.90**
Unit	5	**44.00**
No. 5733		
Std.	100	**$38.90**
Unit	5	**44.00**
No. 5734		
Std.	20	**$58.80**
Unit	5	**68.00**
No. 5735		
Std.	20	**$77.70**
Unit	1	**86.00**
No. 5736		
Std.	100	**$13.70**
Unit	5	**15.00**
No. 5737		
Std.	50	**$57.20**
Unit	5	**64.00**
No. 5738		
Std.	50	**$54.90**
Unit	5	**60.00**

No. 5700 Series Wiremold Fittings

Continued

The fittings listed below are for use with either No. 500 or No. 700 Wiremold.

Use No. 500 series elbows with No. 500 Wiremold. They cost less and make a neater job.



Package	Quantity	Per 100
No. 5738-D		
Std.	20	$157.70
Unit	1	174.00
No. 5738-E		
Std.	20	$68.60
Unit	1	76.00
No. 5739		
Std.	20	$80.00
Unit	5	86.00
No. 5739-A		
Std.	20	$84.70
Unit	5	94.00
No. 5740		
Std.	50	$91.50
Unit	1	100.00
No. 5741		
Std.	20	$68.60
Unit	1	76.00
No. 5742		
Std.	50	$63.50
Unit	5	70.00
No. 5742-A		
Std.	20	$81.80
Unit	5	90.00
No. 5743		
Std.	50	$94.00
Unit	5	100.00
No. 5744		
Std.	20	$89.40
Unit	1	102.00

Can also be furnished 2 and 3-gang.

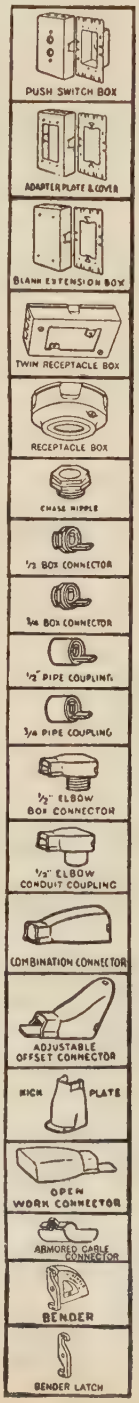
No. 5745		
Std.	20	$66.30
Unit	1	74.00
No. 5747		
Std.	20	$68.60
Unit	1	76.00

Can also be furnished 2 and 3-gang.

No. 5748		
Std.	20	$73.20
Unit	1	80.00

Can also be furnished 2 and 3-gang.

No. 5748-S		
Std.	20	$64.00
Unit	1	70.00
No. 5749		
Std.	20	$105.90
Unit	1	120.00



Package	Quantity	Per 100
No. 5750		
Std.	20	$110.60
Unit	1	126.00
No. 5751		
Std.	20	$64.00
Unit	1	70.00

Can also be furnished 2 and 3-gang.

No. 5760		
Std.	20	$98.80
Unit	1	112.00
No. 5761		
Std.	20	$60.00
Unit	1	66.00
No. 5762		
Std.	20	$32.00
Unit	5	36.00
No. 5780		
Std.	50	$13.70
Unit	5	15.00
No. 5781		
Std.	50	$25.20
Unit	5	28.00
No. 5781-A		
Std.	50	$29.80
Unit	5	34.00
No. 5782		
Std.	50	$32.00
Unit	5	36.00
No. 5782-A		
Std.	50	$32.00
Unit	5	36.00
No. 5783		
Std.	20	$32.00
Unit	5	36.00
No. 5784		
Std.	20	$32.00
Unit	5	36.00
No. 5785		
Std.	50	$22.90
Unit	5	26.00
No. 5786		
Std.	50	$47.10
Unit	5	54.00
No. 5787		
Std.	10	$26.00
Unit	..	32.00
No. 5788		
Std.	20	$34.30
Unit	5	38.00
No. 5790		
Std.	50	$5.20
Unit	..	6.00
No. 600	Each	
Std.	10	$3.80
Unit	1	4.00
No. 600-L	Per 100	
Std.	10	$35.00
Unit	..	40.00

No. 1000 Wiremold

Capacity Single Conductor		Capacity Twisted Pair
*3—No. 6	9—No. 14	6—No. 16
6—No. 8	20—No. 16	7—No. 18
7—No. 10	20—No. 18	7—No. 19
9—No. 12		

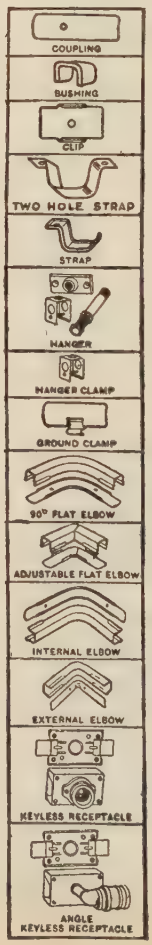
*No. 1000 is designed for main and sub-feeders and various wire groupings such as: telephone, radio, signal and call systems. Where local approval can be obtained three No. 6 wires may be fished in straight runs if a pull box is used every 30 feet.

Furnished in 10-foot lengths.

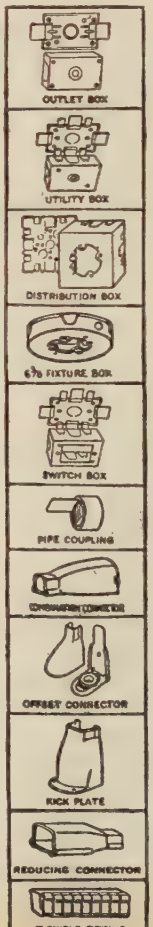
Weight per 1000 feet, 800 pounds.

No. **1000**.....per foot **$.26**

No. 1000 Series Wiremold Fittings

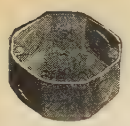


Package	Quantity	Per 100
No. 1001		
Std.	100	$4.20
Less	...	6.00
No. 1002		
Std.	200	$2.50
Less	...	4.00
No. 1003		
Std.	100	$3.20
Less	...	6.00
No. 1004		
Std.	200	$4.30
Less	...	8.00
No. 1005		
Std.	200	$4.30
Less	...	8.00
No. 1008		
Std.	10	$108.00
Less	..	120.00
No. 1008-A		
Std.	10	$25.00
Less	..	28.00
No. 1009		
Std.	100	$15.60
Less	...	20.00
No. 1011		
Std.	10	$42.00
Less	..	46.00
No. 1013		
Std.	10	$40.00
Less	..	46.00
No. 1017		
Std.	10	$44.00
Less	..	48.00
No. 1018		
Std.	10	$38.00
Less	..	42.00
No. 1020		
Std.	10	$82.00
Less	..	90.00
No. 1020-A		
Std.	10	$150.00
Less	..	170.00



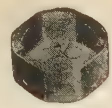
Package	Quantity	Per 100
No. 1020-B		
Std.	10	$50.00
Less	..	58.00
No. 1028		
Std.	5	$74.00
Less	.	84.00
No. 1035		
Std.	10	$118.00
Less	..	132.00
No. 1039		
Std.	10	$100.00
Less	..	110.00
No. 1048		
Std.	5	$110.00
Less	.	120.00
No. 1082		
Std.	10	$60.00
Less	..	70.00
No. 1085		
Std.	10	$32.00
Less	..	36.00
No. 1086		
Std.	10	$74.00
Less	..	82.00
No. 1087		
Std.	5	$30.00
Less	.	34.00
No. 1089		
Std.	10	$15.00
Less	..	16.00
No. 1000-F	Per 18" Section	
Std.	6	$1.90
Less	.	2.10

3¼-Inch Octagon Outlet Boxes



No. 2900

No. 2908



No. 2910

Black enameled or sherardized finish.

Standard package quantity is 100.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Depth Inside Inches	Knockouts Bottom	Knockouts Sides	Wt. Lbs. per 100
24151	2900	$10.50	$12.00	1½	1—½″	4—½″	46
24151	*2900-FS	15.00	16.50	1½	None	4—½″	53
24151	2901	11.50	13.00	1½	1—½″	4—¾″	46
24155	2908	12.00	13.50	1½	3—½″ 4-Loom	4—½″ 4-Loom	46
24155	2910	12.50	14.00	1½	1—½″ 8-Loom	4—½″ 4-Loom	46
24155	†2910-L2	14.00	15.50	1½	1—½″ 8-Loom	4—½″ 4-Loom	56
24155	†*2910-L2-FS	19.00	21.00	1½	8-Loom	4—½″ 4-Loom	53

*FS designates fixture stud installed.

†L2 designates 2-CL65 loom clamps installed.

In any of above boxes not so listed, ⅜-inch fixture stud can be furnished for $8.10 per 100 extra. Specify studs when ordering.

Knockouts designated ½-inch are for ½-inch conduit.

3¼-Inch Octagon Extension Rings

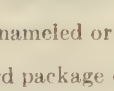
No. 2905

Black enameled or sherardized finish.
Equipped with cover lugs.
Standard package, 100.

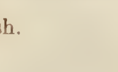
Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Depth Inches	Knockouts in Sides
25151	2904	$22.00	$24.00	1½	4–½″
25151	2905	22.00	24.00	1½	4–¾″

3¼, 3⅜, and 3½-Inch Shallow Ceiling Plates

Take 3¼-Inch Standard Covers



No. 2842



No. 2829

Black enameled or sherardized finish.

Standard package quantity is 100.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Diam. and Depth Inside, Inches	Knockouts	Wt. Lbs per 100
26121	‡2842	.....	$12.00	3¼x¾	2—½″	38
26125	‡2845	$10.50	12.00	3¼x¾	1—½″ 8-Loom	38
36113	‡2835	9.50	10.50	3½x½	1—½″ 8-Loom	38
36114	2829	7.50	9.00	3½x½	1—½″ 8-Loom	34
26716	2850	9.50	11.00	3⅜″ Flat Plate	1—½″ 8-Loom	20
36124	2841	9.50	11.00	3½x¾	1—½″ 8-Loom	40
36123	‡2847	11.50	13.00	3½x¾	1—½″ 8-Loom	40

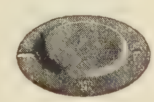
‡Equipped with cover lugs.

Covers for 3¼-Inch Octagon and Round Outlet Boxes

Black enameled or sherardized finish.

Standard package quantity is 100.

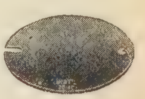
No. 24C2



Raised, closed.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
24C2	28A	$5.00	$5.50	20

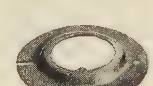
No. 24C1



Flat, closed.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
24C1	28AC	$4.00	$4.50	21

No. 24C31



Raised, with 1 21/32-inch keyed opening for Federal sign receptacle.

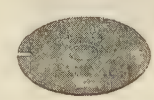
24C31 28AH $5.00 $5.50 18

No. 24C49

Flat, with 1 9/16-inch opening and screw holes on 1¾-inch centers for Benjamin sign receptacle.

24C49 28AL $5.00 $5.50 18

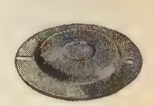
No. 24C6



Flat, with knockout for ½-inch conduit in center.

24C6 28AQ $5.00 $5.50 21

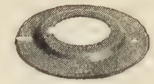
No. 24C7



Raised, with knockout for ½-inch conduit in center.

24C7 28AR $6.00 $6.50 20

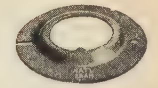
No. 24C35



Raised, with 1½-inch opening for sign receptacles, notched for protruding lug on porcelain.

24C35 28HG $5.00 $5.50 18

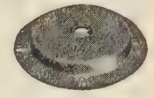
No. 24C36



Raised, with 1½-inch diameter opening and bent tongue to fit notches in new standard sign receptacles.

24C36 28HH $6.00 $6.50 38

No. 24C12



Raised, with ⅜-inch metal eyelet for drop cord.

24C12 28L $5.00 $5.50 20

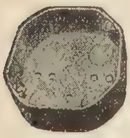
No. 24C28

Flat, with slots for surface devices. Opening 1⅞-inch screw centers 15/16 to 1 13/16 inches.

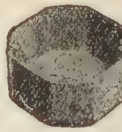
*24C28 28S $6.00 $6.50 17

*Two 6/32 by ¾ inch screws and nuts furnished with each cover.

4-Inch Octagon Outlet Boxes



No. 2700



No. 2714

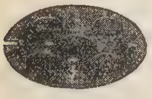
Black enameled or sherardized finish.

Standard package quantity is 100.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Depth Inside Inches	Knockouts Bottom	Knockouts Sides	Wt. Lbs. per 100
54151	2700	$13.00	$15.00	1½	5—½″	4—½″	64
*54151FS	2700FS	17.50	19.00	1½	5—½″	4—½″	69
54151	2701	15.00	17.00	1½	3—½″ 2—¾″	4—¾″	64
54151	2702	15.00	17.00	1½	3—½″ 2—¾″	2—½″ 2—¾″	64
54155	2708	18.50	20.00	1½	3—½″ 6-Loom	4—½″ 8-Loom	64
54171	2714	23.00	26.00	2⅛	5—½″	4—½″	82
54171	2715	23.00	26.00	2⅛	3—½″ 2—¾″	4—¾″	82
54171	2790	23.00	26.00	2⅛	3—½″ 2—¾″	4—1″	82

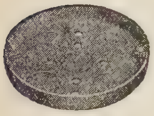
*FS designates fixture stud installed.

4-Inch Shallow Ceiling Boxes and Plates

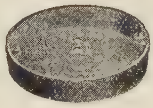


No. 2646

No. 2624



No. 2630



No. 2644

Black enameled or sherardized finish.

Standard package quantity is 100.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Diam. and Inside Depth, In.	Knockouts	Cover Lugs.	Wt. Lbs. per 100
56712	2646	$7.00	$8.50	†4	5—½″	No	30
56112	2624	8.00	9.50	4x½	5—½″	No	42
56112	2625	8.00	9.50	4x½	1—½″ 4—¾″	No	42
56111	2630	9.50	11.00	4x½	5—½″	Yes	42
56111	2631	9.50	11.00	4x½	1—½″ 4—¾″	Yes	42
56111	*2631FS	14.00	15.50	4x½	4—¾″	Yes	48
56115	2632	14.50	16.00	4x½	3—½″ 6-Loom	Yes	42
56122	2636	13.50	15.00	4x¾	5—½″	No	48
56122	2637	13.50	15.00	4x¾	1—½″ 4—¾″	No	48
56126	2638	13.50	15.00	4x¾	3—½″ 6-Loom	No	48
56121	2642	15.50	17.00	4x¾	5—½″	Yes	48
56121	2643	15.50	17.00	4x¾	1—½″ 4—¾″	Yes	48
56125	2644	15.50	17.00	4x¾	3—½″ 6-Loom	Yes	48

*FS designates fixture stud installed.
†Flat plate.

4-Inch Octagon Extension Rings

No. 2705

Rings have two tapped lugs at one end, and two untapped lugs at the other end.

Black enameled or sherardized finish.

Standard package quantity is 100.

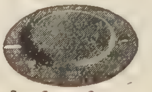
No. 2715

Cat. No. Universal	Cat. No. National	Black Enamel per 100	Sherardized per 100	Depth Incnes	Knockouts	Wt., Lbs. per 100
55151	2704	$22.00	$24.00	1½	4–½″	46
55151	2705	22.00	24.00	1½	4–¾″	46
55171	2716	45.00	49.00	2⅛	4–½″	60
55171	2717	45.00	49.00	2⅛	4–¾″	60
55171	2792	45.00	49.00	2⅛	4–1″	60

Covers for 4-Inch Octagon and Round Outlet Boxes

Black enameled or sherardized finish.
Standard package quantity is 100.

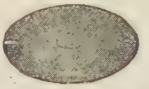
No. 54C2



Raised, closed.

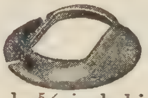
Cat. No. Universal	Cat. No. National	Black Enamel per 100	Sherardized Per 100	Wt. Lbs. per 100
54C2	26A	$6.00	$7.00	35

No. 54C6



Flat, with k.o. for ½-inch conduit in center.
54C6 26AQ $6.00 $7.00 30

***No. 54C14**

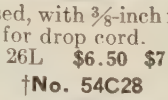


Raised, ⅝ inch high, for one rectangular base switch or receptacle. Also suitable for bracket outlet.
*54C14 26H $11.00 $12.00 25

No. 54C35

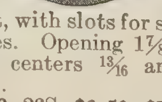
Raised, with 1½-inch opening for sign receptacles, notched for protruding lug on porcelain.
54C35 26HG $6.50 $7.50 32

No. 54C12



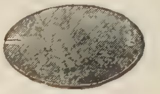
Raised, with ⅜-inch metal eyelet for drop cord.
54C12 26L $6.50 $7.50 35

†No. 54C28



Flat, with slots for surface devices. Opening 1⅞ inch; screw centers 13/16 and 1 15/16 inches.
†54C28 26S $6.50 $7.50 26

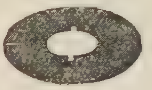
No. 54C1



Flat, closed.

Cat. No. Universal	Cat. No. National	Black Enamel per 100	Sherardized Per 100	Wt. Lbs. per 100
54C1	26AC	$5.00	$6.00	30

No. 54C49



Flat, with 1 9/16-inch opening and screw holes on 1¾-inch centers for Benjamin sign receptacle.
54C49 26AL $6.00 $7.00 25

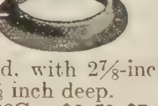
No. 54C7

Raised, with k.o. for ½-inch conduit in center.
54C7 26AR $6.50 $7.50 37

No. 54C31

Raised, with 1 21/32-inch keyed opening for Federal sign receptacle.
54C31 26AH $7.00 $8.00 32

No. 54C48



Raised, with 2⅞-inch opening ⅝ inch deep.
54C48 26C $6.50 $7.50 26

No. 54C36

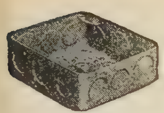
Raised, with 1½-inch diameter opening and bent tongue to fit notches in new standard receptacles.
54C36 26HH $6.50 $7.50 32

No. 54C3

Raised, 2⅞-inch opening, 11/16 inch deep. Lugs tapped 8/32 on 2¾-inch centers.
54C3 26Q $7.50 $8.50 26

*Has extra slot and screw hole so it can be turned 90° from normal position if desired.
†Two 6/32x¾-inch screws and nuts with each cover.

4-Inch Square Outlet Boxes



No. 2410

Two-hole cover lugs are standard on all 4-inch square boxes.

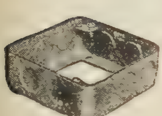
Black enameled or sherardized finish.

Standard package quantity is 100.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Depth Inside Inches	Knockouts Bottom	Knockouts Sides	Wt. Lbs. per 100
52151	2400	$15.00	$18.00	1½	5–½″	10–½″	80
*52151FS	*2400FS	19.00	22.00	1½	4–½″	10–½″	85
52151	2401	17.50	20.00	1½	1–½″ 4–¾″	8–¾″ 2–½″	82
51151	2402	17.50	20.00	1½	5–½″	8–½″ 2-Gas	80
51151	2403	17.50	20.00	1½	3–½″ 2–¾″	8–¾″ 2-Gas	80
52151	2406	17.50	20.00	1½	3–½″ 2–¾″	8–¾″	80
52151	2410	17.50	20.00	1½	3–½″ 2–¾″	8–½″ 4–¾″	80
52151FS	*2410FS	21.00	24.00	1½	2–½″ 2–¾″	8–½″ 4–¾″	85

*FS designates fixture stud installed.

4-Inch Square Extension Rings



No. 2404

These rings have two tapped lugs on one end and four pierced holes on opposite end. The two tapped lugs have a double set of fastening holes so that covers can be mounted 90° from normal position.

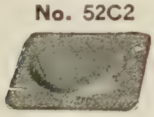
Black enameled or sherardized finish.
Standard package quantity is 100.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Depth Inches	Knockouts	Wt. Lbs. per 100
53151	2404	$23.00	$25.00	1½	10–½″	62
53151	2405	23.00	25.00	1½	8–¾″	62

Covers for 4-Inch Square Outlet Boxes

Black enameled or sherardized finish.
Standard package quantity is 100.

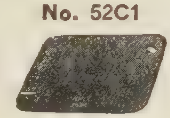
No. 52C2



Raised, closed.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
52C2	24A	$8.50	$9.50	45

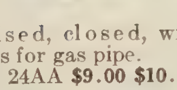
No. 52C1



Flat, closed.

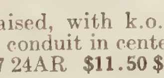
Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
52C1	24AC	$6.00	$7.50	38

No. 51C4



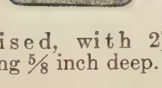
Raised, closed, with flanges for gas pipe.
51C4 24AA $9.00 $10.00 45

No. 52C7



Raised, with k.o. for ½-inch conduit in center.
52C7 24AR $11.50 $13.00 45

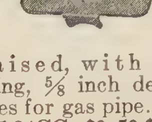
No. 52C48



Raised, with 2⅞-inch opening ⅝ inch deep.

52C48 24C $9.00 $10.00 32

No. 51C55



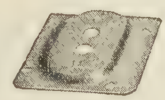
Raised, with 2⅞-inch opening, ⅝ inch deep with flanges for gas pipe.
51C55 24CC $9.50 $11.00 33

Surface Mounting Covers for 4-Inch Square Outlet Boxes

Black enameled or galvanized finish.

Standard package quantity is 100.

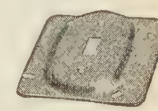
No. N-8490



Raised ½ inch.
For one push button switch.

Cat. No.	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
N-8490	$22.00	$24.00	43

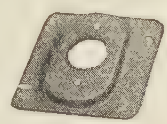
No. N-8491



Raised ½ inch.
For one square handle toggle switch.

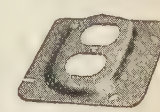
Cat. No.	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
N-8491	$22.00	$24.00	43

No. N-8492



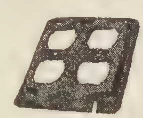
Raised ½ inch.
For one single flush receptacle.
N-8492 $22.00 $24.00 41

No. N-8493



Raised ½ inch.
For one duplex receptacle.
N-8493 $22.00 $24.00 40

No. N-8493A



Raised ½ inch.
For two duplex receptacles.
N-8493A $34.00 $36.00 43

No. N-8494

Raised ½ inch.
For two push button switches.
N-8494 $34.00 $36.00 45

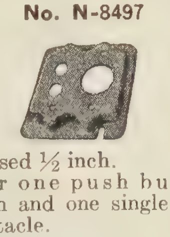
No. N-8495

Raised ½ inch.
For two square handle toggle switches.
N-8495 $34.00 $36.00 45

No. N-8496

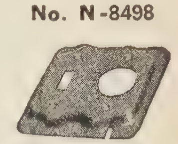
Raised ½ inch.
For two single flush receptacles.
N-8496 $34.00 $36.00 43

No. N-8497



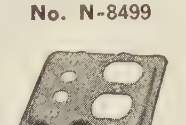
Raised ½ inch.
For one push button switch and one single flush receptacle.
N-8497 $34.00 $36.00 43

No. N-8498



Raised ½ inch.
For one square handle toggle switch and one single flush receptacle.
N-8498 $34.00 $36.00 43

No. N-8499



Raised ½ inch.
For one push button switch and one duplex receptacle.
N-8499 $34.00 $36.00 43

No. N-8500

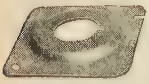
Raised ½ inch.
For one square handle toggle switch and one duplex receptacle.
N-8500 $34.00 $36.00 43

Covers for 4-Inch Square Outlet Boxes

Black enameled or sherardized finish.

Standard package quantity is 100.

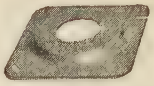
No. 52C35



Raised, with 1½-inch opening for sign receptacles, notched for protruding lug on porcelain.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
52C35	24HG	$11.50	$13.00	45

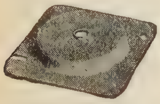
No. 52C36



Raised, with 1½-inch opening and bent tongue to fit notches in new standard sign receptacles.

Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Wt. Lbs. per 100
52C36	24HH	$11.50	$13.00	45

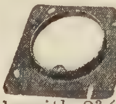
No. 52C12



Raised, with ⅜-inch metal eyelet for drop cord.

52C12	24L	$13.50	$15.00	44

No. 52C3



Raised, with 2¾-inch opening, ⅝ inch deep. Lugs tapped 8/32 on 2¾-inch centers.

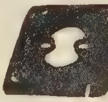
*52C3	24Q	$9.50	$11.00	33

No. 51C5

Raised, with 2¾-inch opening, ⅝ inch deep. Lugs tapped 8/32 on 2¾-inch centers with flanges for gas pipe.

51C5	24QQ	$10.00	$11.50	34

No. 52C28

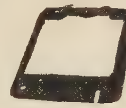


Flat, with slots for surface devices, opening 1⅞", centers 15/16 and 1 13/16".

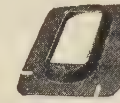
†*52C28	24S	$14.50	$16.00	34

Flush Device Covers

No. 24HZ

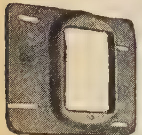


No. 24KY

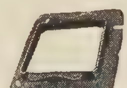


No. 24H

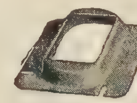
Cat. No. Universal	Cat. No. National	Black Enamel Per 100	Sherardized Per 100	Size Inches	Depth Inches	No. of Devices	Wt., Lbs. Per 100
*52C62	24HZ	$9.50	$10.50	4	¼	1	28
*52C13	24HY	10.00	11.50	4	½	1	30
*52C17	24KY	12.00	13.50	4	½	2	24
*52C14	24H	11.50	13.00	4	¾	1	35



No. ‡24HX

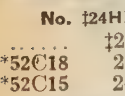


No. 24K

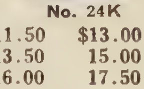


No. 24HK

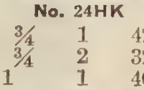
......	‡24HX	$11.50	$13.00	4x4⅞	¾	1	42
*52C18	24K	13.50	15.00	4	¾	2	32
*52C15	24HK	16.00	17.50	4	1	1	40



No. 24KK



No. 24HL



No. 24KL

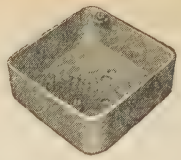
*52C19	24KK	$19.00	$20.50	4	1	2	38
*52C16	24HL	18.50	19.50	4	1¼	1	44
*52C21	24KL	22.00	24.00	4	1¼	2	44

*Covers have extra slots and screw holes so they may be turned 90 degrees from normal position if desired.

†Two 6/32x¾-inch screws and nuts with each cover.

‡An adjustable cover which can be shifted ⅝ inch to right or left of normal center line; total adjustment 1¼ inches. Useful when boxes have been set too close to door trim, and for lining up a row of convenience outlets. Fits 4-inch square boxes of any make.

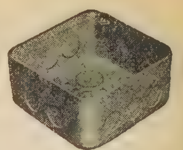
4 11/16-Inch Square Outlet Boxes



No. 2500

Sherardized finish only.

Standard package quantity is 100.

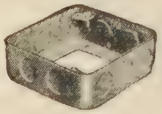


No. 2514

Cat. No. Universal	Cat. No. National	Per 100	Depth Inside In.	Knockouts Bottom	Knockouts Sides	Wt., Lbs. per 100
72151	2500	$56.00	1½	3–½"	10–½"	104
72151	2501	56.00	1½	2–¾"	8 ¾"	104
72171	2514	67.00	2⅛	3–½"	10–½"	124
72171	2515	67.00	2⅛	2–¾"	8–¾"	124
72171	2590	67.00	2⅛		8–1"	124

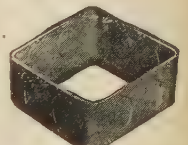
4 11/16-Inch Extension Rings

Sherardized finish only.



No. 2504

Standard package quantity is 100.



No. 2517

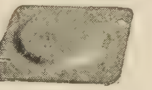
Cat. No. Universal	Cat. No. National	Per 100	Depth In.	Knockouts Sides	Wt., Lbs. per 100
83151	2504	$67.00	1½	10-½"	64
83151	2505	67.00	1½	8-¾"	64
83181	2516	89.00	2⅛	10–½"	112
83181	2517	89.00	2⅛	8–¾"	112
83181	2518	89.00	2⅛	8–1"	112

Covers for 4 11/16-Inch Square Outlet Boxes

Sherardized finish only.

Standard package quantity is 100.

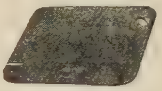
No. 72C2



Raised, closed.

Cat. No. Universal	Cat. No. National	Per 100	Wt., Lbs. per 100
72C2	25A	$32.00	60

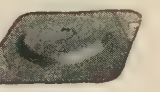
No. 72C1



Flat, closed.

Cat. No. Universal	Cat. No. National	Per 100	Wt., Lbs. per 100
72C1	25AC	$27.00	53

No. 72C7



Raised, with k.o. for ½-inch conduit in center.

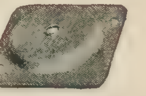
72C7	25AR	$34.00	60

No. 72C48

Raised, with 2⅞-inch opening, ⅝ inch deep.

72C48	25C	$34.00	46

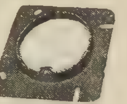
No. 72C12



Raised, with ⅜-inch metal eyelet for drop cord.

72C12	25L	$34.00	60

***No. 72C3**



Raised, with 2⅞-inch opening, ⅝-inch deep. Lugs tapped 8/32 on 2¾-inch centers.

*72C3	25Q	$34.00	43

Flush Device Covers

No. 25H

No. 25HK

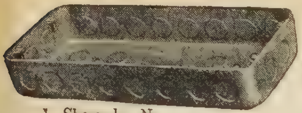
No. 25HL

No. 25K

Cat. No. Universal	Cat. No. National	Per 100	Depth Inches	No. of Devices	Wt., Lbs. per 100
*72C14	25H	$34.00	¾	1	45
*72C15	25HK	36.00	1	1	58
*72C16	25HL	34.00	1¼	1	63
*72C18	25K	44.00	¾	2	52

*Covers have extra slots and screw holes so they may be mounted 90 degrees from normal position if desired.

National Gang Boxes



Holes provided in bottom of box for nails.

Width, 4½ inches. Depth inside, $1\frac{11}{16}$ inches.

Cat. No.	Sherardized Per 100	No. of Gangs	Length Inches	Knockouts End	Knockouts Each Side	Knockouts Bottom	Std. Pkg.	Wt., Lbs. per 100
3002	$86.00	2	6⅞	2–½″	5–½″	5–½″	50	176
3012	86.00	2	6⅞	2–¾″	4–¾″	4–¾″	50	176
3003	124.00	3	8⅝	2–½″	6–½″	10–½″	25	224
3013	124.00	3	8⅝	2–¾″	6–¾″	2–½″, 8–¾″	25	224
3004	162.00	4	10½	2–½″	8–½″	10–½″	25	256
3014	162.00	4	10½	2–¾″	7–¾″	2–½″, 8–¾″	25	256
3005	220.00	5	12¼	2–½″	8–½″	10–½″	15	305
3015	220.00	5	12¼	2–¾″	8–¾″	2–½″, 8–¾″	15	305
3006	430.00	6	14	2–½″	10–½″	10–½″	15	330
3016	430.00	6	14	2–¾″	8–¾″	2–½″, 8–¾″	15	330
3007	640.00	7	16	2–½″	10–½″	10–½″	5	430
3017	640.00	7	16	2–¾″	10–¾″	2–½″, 8–¾″	5	430
3008	690.00	8	17¾	2–½″	12–½″	10–½″	5	480
3018	690.00	8	17¾	2–¾″	12–¾″	2–½″, 8–¾″	5	480
3009	750.00	9	19½	2–½″	14–½″	10–½″	5	520
3019	750.00	9	19½	2–¾″	12–¾″	2–½″, 8–¾″	5	520

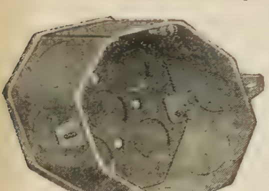
National Covers for Gang Boxes

Covers are furnished in sherardized finish only.

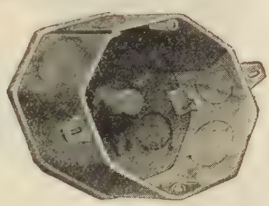
Cat. No.	Sherardized Per 100	No. of Gangs	Cat. No. of Box Designed For	Cat. No. Box Special Fit	Std. Pkg.	Wt., Lbs. Std. Pkg.
30C2	$38.00	2	3002, 3012	....	50	74
30C3	57.00	3	3003, 3013	3002, 3012	25	76
30C4	86.00	4	3004, 3014	3003, 3013	25	106
30C5	105.00	5	3005, 3015	3004, 3014	25	130
30C6	200.00	6	3006, 3016	3005, 3015	15	100
30C7	352.00	7	3007, 3017	3006, 3016	10	170
30C8	400.00	8	3008, 3018	3007, 3017	5	220
30C9	450.00	9	3009, 3019	3008, 3018	5	240
30C10	490.00	10	....	3009, 3019	5	260

National Outlet Boxes for Concrete Work

4-Inch Octagon, Sherardized Finish



No. 3202

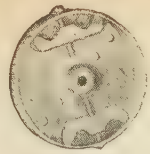


No. 3203

Cat. No.	Universal No.	Depth Inches	Knockouts No. and Size, Inches	Stud	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price per 100
3102	54521	1½	4–½ & 4–¾	No	25	72	$35.00
3103	54521	1½	4–½ & 4–¾	Yes	25	72	39.00
3202	54531	2	4–½ & 4–¾	No	25	92	41.00
3203	54531	2	4–½ & 4 ¾	Yes	25	92	45.00
3302	54551	3	4–½ & 4–¾	No	10	120	50.00
3303	54551	3	4–½ & 4–¾	Yes	10	120	54.00
3304	54551	3	4–¾ & 4–1	No	10	125	50.00
3305	54551	3	4–¾ & 4–1	Yes	10	125	54.00
3402	54561	3½	4–½ & 4–¾	No	10	130	58.00
3403	54561	3½	4–½ & 4–¾	Yes	10	130	62.00
3404	54561	3½	4–¾ & 4–1	No	10	130	58.00
3405	54561	3½	4–¾ & 4–1	Yes	10	130	62.00
3502	54571	4	4–½ & 4–¾	No	10	140	64.00
3503	54571	4	4–½ & 4–¾	Yes	10	140	68.00
3504	54571	4	4–¾ & 4–1	No	10	140	64.00
3505	54571	4	4–¾ & 4–1	Yes	10	140	68.00
3602	54581	5	4–½ & 4–¾	No	10	170	71.00
3603	54581	5	4–½ & 4–¾	Yes	10	170	75.00
3604	54581	5	4–¾ & 4–1	No	10	170	71.00
3605	54581	5	4–¾ & 4–1	Yes	10	170	75.00
3702	54591	6	4–½ & 4–¾	No	10	200	85.00
3703	54591	6	4–½ & 4–¾	Yes	10	200	89.00
3704	54591	6	4–¾ & 4–1	No	10	200	85.00
3705	54591	6	4–¾ & 4–1	Yes	10	200	89.00

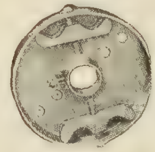
National Shallow Boxes

For Loom and Loomwire

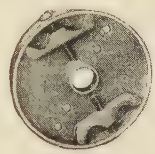


Nos. 2375 and 2385

No. 2385-D



No. 2376



No. 2377

No. 2388-D

Has CL-65 clamps and $\frac{41}{64}$-inch knockouts. There is ample room for splices. Has double grip clamp for loom. Brass ferrule in addition should be used for armored cable. Extra knockouts for cable or loom and screw hole for extra clamp. Boxes ½-inch deep when mounted on box bars or against lath, will be even with the plaster.

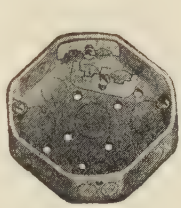
Black enameled or sherardized finish.

Standard package, 100.

Cat. No.	Black Enamel Per 100	Sherardized Per 100	Size Inches	No. of Clamps	Wt., Lbs. per 100
Nos. 2375 and 2385 — With ⅜-inch fixture stud. Also furnished mounted on duplex bar No. 2262.					
2375	$15.00	$16.00	3¼x½	1	33
2385	.....	20.00	3¼x¾	1	44
No. 2385-D — With ⅜-inch fixture stud. Also furnished mounted on duplex bar No. 2262.					
2385-D	$25.00	$27.00	3¼x1½	1	56
No. 2376 — Has sleeve for ⅜-inch gas pipe.					
2376	$13.00	$14.50	3¼x½	1	33
No. 2377 — Has ⅜-inch female thread. Also furnished on duplex bar No. 2262.					
2377	$15.00	$16.50	3¼x½	1	33
No. 2388-D — Has ½-inch conduit knockout in center.					
2388-D	$20.00	$22.00	3¼x1½	1	52

No. 2708-L2 National Deep Boxes

For Loom and Loomwire



This octagon box has three ½-inch knockouts and 6-loom or loomwire in the bottom, and one ½-inch knockouts or 8-loom or loomwire.

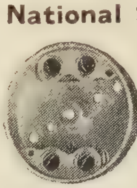
Furnished with cover lugs.

Has two CL-2 clamps.

It can be used for armored cable with brass ferrules.

Cat. No.	Black Enamel Per 100	Sherardized Per 100	Diam. In.	Depth In.	Std. Pkg.	Wt., Lbs. per 100
2708-L2	$19.00	$21.00	4	1½	100	50

National Shallow Boxes for Armored Cable



No. 2365

Will take loom or both loom and armored cable in same box. Holds from 1 to 4 cables of 2 or 3 wires each or 4 pieces of loom or combination of both. With two CL-65 clamps. Nos. 2365 and 2365-D supplied mounted on Bendit or duplex bar; No. 2367 on duplex bar. Four $\frac{41}{64}$-inch k.o.'s for 14/2, 14/3 and 12/2 cable. Diameter, 3¼ in. Depth, ¾ in. except Nos. 2365-D and 2368-D which are 1½ inches deep.

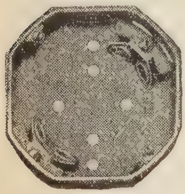
Cat. No.	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100 Sherardized
2365	With ⅜-Inch Fixture Stud........	100	44	$20.00
2365-D	With ⅜-Inch Fixture Stud........	100	60	27.00
2366	With Sleeve for ⅜-Inch Gas Pipe..	100	44	18.50
2367	With ⅜-Inch Female Thread	100	44	20.00
2368	With ½-Inch Conduit K.O. in Center	100	44	16.00
2368-D	With ½-Inch Conduit K.O. in Center	100	60	22.00

Deep Octagon and Round Boxes

For Armored Cable

Box is equipped with either fixture stud or ½-inch center conduit knockout. Box will be supplied mounted on Bendit box bars as complete units. Two CL-55 clamps used with side knockouts. Box has cover lugs and screws for standard covers. Standard package is 100. Sherardized finish.

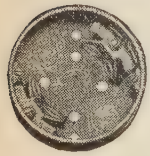
Octagon



With 8-cable and loom and four ½-in. conduit knockouts in side; No. 2345 has two ½-inch conduit knockouts in bottom, No. 2348 has three ½-inch conduit knockouts in bottom.

Cat. No.	Size In.	Black Enamel Per 100	Sherardized Per 100	Fixture Stud, In.	Wt., Lbs. per 100
2345	4x1½	**$27.00**	**$29.00**	⅜ Male	72
2348	4x1½	**22.00**	**24.00**	No	73

Round

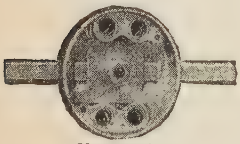


With 4-cable and loom and two ½-inch conduit knockouts in side; No. 2355 has 2-cable or loom in bottom, No. 2358 has one ½-inch conduit knockout and 2-cable or loom in bottom.

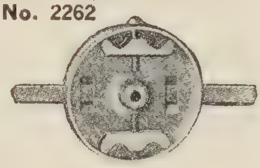
Cat. No.	Size In.	Black Enamel Per 100	Sherardized Per 100	Fixture Stud, In.	Wt., Lbs. per 100
2355	3¼x1½	**$25.00**	**$27.00**	⅜ Male	70

Economy Box and Bar Sets

Cable and Loom Boxes Mounted on National Duplex Bar No. 2262



No. 2296



No. 2297

No. 2299

Duplex bar No. 2262 is 20 inches long, ½ inch wide, $\frac{3}{16}$ inch thick; made from $\frac{1}{16}$-inch flat rolled steel strip folded on itself in the form of a flat U-shaped channel. A blow with a hammer slides box to any desired position.

Has CL-65 clamps.

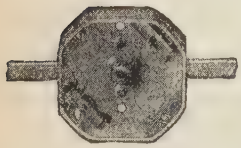
Sherardized finish only.

Standard package, 100.

Cat. No.	Box Used	Per 100	Diameter Inches	Depth Inches	No. of Clamps	Wt., Lbs. Std. Pkg.
With ⅜-Inch Fixture Stud — For Armored Cable or Loom						
2296	2365	**$30.00**	3¼	¾	2	84
For Loom or Loom Wire						
2297	2375	**$26.00**	3¼	½	1	72
With ⅜-Inch Female Thread — For Loom or Loom Wire						
2299	2377	**$26.00**	3¼	½	1	72

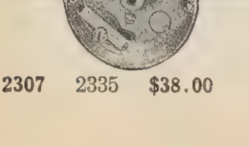
National Box and Bar Sets

Cable and Loom Boxes Mounted on Bendit Bar No. 2260



No. 2305

Two ½-inch knockouts in bottom; four ½-inch insides; 8 loom or Loom-Wire knockouts in sides. Furnished with cover lugs.



No. 2307

Two ½-inch knockouts in sides, 4 loom or Loom Wire knockouts in sides and two in bottom. Furnished with cover lugs.

Set Cat. No.	Box Used	Sherardized Per 100	Diam. In.	Depth In.	Fixture Stud, In.	Clamps	Wt., Lbs. Std. Pkg.
2305	2325	**$38.00**	4	1½	⅜	2CL45	138
2307	2335	**$38.00**	3¼	1½	⅜	1CL45	122

National Interchangeable Sectional Switch Boxes

For Loom

The sides and spacers (or units) of these boxes are interchangeable with similar types of certain other makes. Black enameled or sherardized finish. Standard Package, 50.

No. 1

Nos. 1 and 2

With two ⅝-inch loom knockouts in bevels; No. 1 has also two ⅝-inch loom in sides and one ½-inch conduit in bottom.

Has no clamps.

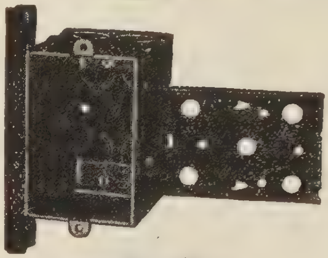
Cat. No.	Black Enamel Per 100	Sherardized Per 100	Depth In.	Wt., Lbs. Std. Pkg.
1	**$12.00**	.....	2	55
1 Unit	**9.00**	.....	2	29
2	**14.00**	**$16.50**	2	58
2 Unit	**11.00**	**13.50**	2	32

No. 3

No. 3

With two ⅝-inch loom knock-outs in bevels; No. 3 has also two ⅝-inch loom in sides and 1½-inch conduit in bottom. Has no clamps.

Cat. No.	Black Enamel Per 100	Sherardized Per 100	Depth In.	Wt., Lbs. Std. Pkg.
3	**$14.00**	**$16.00**	2¼	59
3 Unit	**11.00**	**13.00**	2¼	32



No. 3-SB

No. 3-SB

With two ⅝-inch loom knockouts in bevels; No. 3-SB has also two ⅝-inch loom in sides and 1½-inch conduit in bottom. Has no clamps.

Cat. No.	Black Enamel Per 100	Sherardized Per 100	Depth In.	Wt., Lbs. Std. Pkg.
3-SB	**$23.00**	**$26.00**	2¼	80

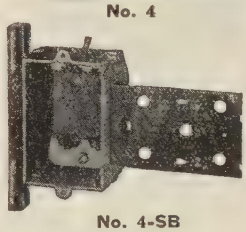
No. 4

No. 4

With two ⅝-inch loom knockouts in bevels; No. 4 has also two ⅝-inch loom in sides and 1½-inch conduit in bottom.

With 2 loom clamps.

Cat. No.	Black Enamel Per 100	Sherardized Per 100	Depth In.	Wt., Lbs. Std. Pkg.
4	**$16.00**	**$18.00**	2¼	63
4 Unit	**13.00**	**15.00**	2¼	33



No. 4-SB

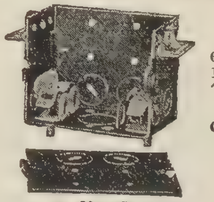
No. 4-SB

With two ⅝-inch loom knockouts in bevels; No. 4-SB has also two ⅝-inch loom in sides and 1½-inch conduit in bottom. Has 2 loom clamps.

Cat. No.	Black Enamel Per 100	Sherardized Per 100	Depth In.	Wt., Lbs. Std. Pkg.
4-SB	**$25.00**	**$28.00**	2¼	84

National Interchangeable Sectional Switch Boxes

For Armored Cable and Loom Wire



No. 7

Has two $\frac{23}{32}$-inch cable knockouts in ends; two in sides; and four in bottom; ½-inch knockout in bottom.

Square corners. Two CL-4 flanged clamps. Swivel ears.

Sherardized or black enamel finish.

Standard package, 50.

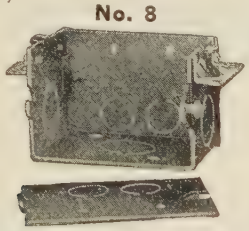
No.	7	12
Black Enamel .... per 100	**$16.00**	**$17.50**
Sherardized .... per 100	**18.00**	**19.00**
Depth .... inches	2	2½
Carton Quantity	..	1
Weight, per 100 .... pounds	66	75

National Interchangeable Sectional Switch Boxes

For Conduit

Square corners. No clamps.
Sherardized or black enamel finish.
Carton quantity, 1.

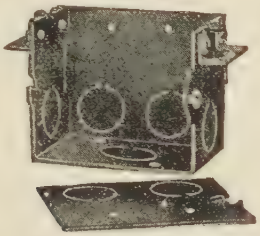
No. 8



With one ½-inch conduit knockout in ends, one ½-inch conduit k.o. in bottom; No. 8 has also two ⅝-inch loom k.o. in sides.

Cat. No.	Per 100 Sher.	Per 100 Enam.	Depth Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
8	$17.00	$15.00	2	50	58
8 Unit	14.00	12.00	2	50	39

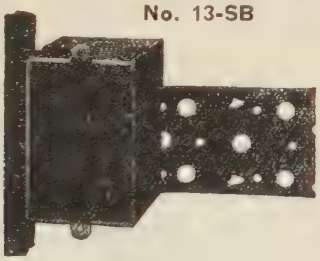
No. 13



With one ½-inch conduit knockout in ends, one ½-inch conduit k.o. in bottom; No. 13 has also two ½-inch conduit k.o. in sides.

Cat. No.	Per 100 Sher.	Per 100 Enam.	Depth Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
13	$17.00	$15.00	2½	50	76
13 Unit	14.00	12.00	2½	50	40

No. 13-SB



With one ½-inch conduit knockout in ends, one ½-inch conduit k.o. in bottom; No. 13-SB has also two ½-inch conduit k.o. in sides.

Cat. No.	Per 100 Sher.	Per 100 Enam.	Depth Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
13-SB	$27.00	$24.00	2½	50	86

No. 14

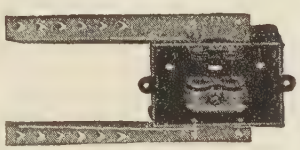
With one ½-inch conduit knockout in ends, one ½-inch conduit k.o. in bottom; No. 14 has also two ½-inch conduit k.o. in sides.

Cat. No.	Per 100 Sher.	Per 100 Enam.	Depth Inches	Std. Pkg.	Wt., Lbs. Std., Pkg.
14	$17.00	$15.00	2¾	50	86
14 Unit	14.00	12.00	2¾	50	47

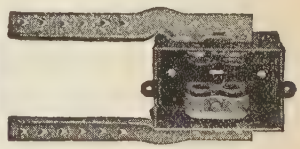
National Interchangeable Sectional Switch Boxes

For Armored Cable, with Extended Ears

No. 12-X



No. 12-XR



No. 12-XW

These boxes have square corners. Clamps are of the new knockout closing type.

Knockouts for cable are $^{23}/_{32}$-inch in diameter.

Boxes have two $^{23}/_{32}$-inch cable knockouts in each end; two in each side and four in bottom.

Nos. 7-X and 12-X have two flanged CL-4 clamps, and no lath support.

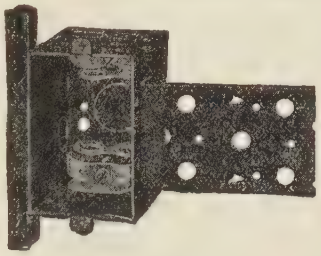
Nos. 12-XR and 12-XW have two flanged CL-3 clamps.

Sherardized or black enameled finish.

Cat. No.	7-X	12-X	12-XR	12-XW
Black Enamel....per 100	$23.00	$24.00	$28.00	$32.00
Sherardized....per 100	26.00	27.00	31.00	35.00
Depth....inches	2	2½	2½	2½
Standard Package....	50	50	50	50
Weight, per 100....pounds	69	77	77	77

No. 12-SB National Interchangeable Sectional Switch Boxes

For Armored Cable and Loom Wire



Made especially for use with A.B.C. armored bushed cable and anti-short bushings, but equally suitable for use with any cable. The special clamps have knockout closing flanges, lookouts which render the anti-shorts visible for inspection, and a baffle plate which holds the anti-short inside A.B.C. cable and eliminates brass ferrules used with other types of cables.

In this box, slots are provided beside each knockout, into which a screwdriver may be inserted to pry out the knockout disc.

The stud brackets and lath supports welded-on this box are gauged to fit standard spacing of lath and plaster. This assembly is vibration-proof and will not become loose.

Lath support extends at least ¾ inch beyond top and bottom of switch box allowing lath to pass through extended portions of lath support, and entirely across studding. This additional support makes section of all around switch box the strongest portion. The box is held by stud bracket, by lath above and below, and by shortened lath which terminate in groove of lath support.

The box is easy to install making it a real time and labor saver.

Depth 2½ inches. Has two $^{21}/_{32}$-inch cable knockouts in ends; two in sides; one ½-inch knockout in bottom and fixture stud holes. Welded-on stud bracket and lath support.

Two CL-4 flanged clamps.

Sherardized or black enameled finish.

Standard package, 50.

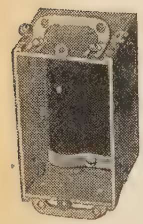
Weight, 80 pounds per 100.

No. 12-SB, Sherardized.....per 100 $30.00
No. 12-SB, Black Enameled.....per 100 27.00

National Sectional Switch Boxes

Square Corners

For Armored Cable



No. 4168

With two $\frac{23}{32}$-inch cable knockouts in ends, four $\frac{23}{32}$-inch cable in bottom; No. 4168 has also two $\frac{23}{32}$-inch cable in sides.

Depth, 2½ inches.

Black enameled finish.

With 2 clamps.

Carton, 1. Standard package, 100.

Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
4168	$16.50	Box, with Clamps	76
4168-SB	26.00	Stud Bracket	93

For Conduit

No. 4176

With one ⅞-inch knockout in ends, two ⅞-inch knockouts in bottom; No. 4176 has also two ⅞-inch knockouts in sides.

Depth, 2½ inches.

Black enameled finish.

No clamps.

Carton quantity, 1. Standard package, 100.

Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
4176	$15.00	Box, No Clamps	65
4176-SB	24.00	Stud Bracket	88

National Sectional Switch Boxes

Boxes for Shallow Type Switches and Devices Taking Rigid Conduit or Armored Cable and Ovalflex Square Corners

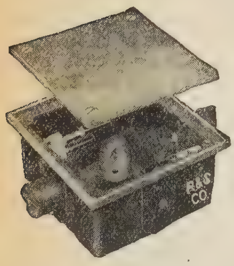
Without supporting ears. No clamps.

Nos. 4170 and 4171 have one ⅞-inch knockout in sides, ends and bottom for ½-inch conduit, one $\frac{23}{32}$-inch knockout in sides for armored cable. Nos. 4172 and 4173 have one ⅞-inch knockout in ends and bottom for ½-inch conduit. Black enamel or sherardized finish. Standard package, 50.

*Standard switch and device plates will cover the box, but not the supporting ears.

Cat. No.	Sher. Per 100	Enam. Per 100	Description	Size Inches	Wt.,Lbs. Std.Pkg.
4170	$23.00	$25.00	Box..................	1½	65
4172	20.00	22.00	Spacer for 4170.......	1½	33
*4171	25.00	27.00	Box..................	1½	65
4173	22.00	24.00	Spacer for 4171.......	1½	33

R & S Fixture Hanger Boxes



For supporting and lowering fixtures or chandeliers in theatres, lobbies and auditoriums from the floor above or from hung ceilings, thus providing an easy means for relamping and cleaning. Circuits of chandelier are disconnected by means of single-pole plugs, the safety devices removed and fixture then lowered by means of special portable winch previously connected to eye of chandelier by steel cable.

The use of two 3x3x⅜-inch thick angle iron supports under box to distribute load over a large area or across eye beams in ceiling is recommended. Cast iron box is fitted with brass floor flange and gasketed brass cover. Dimensions over all, 10½x10½x5 inches deep.

Maximum conduit, 1½ inches in center of all sides. Specify size and location of outlets when ordering.

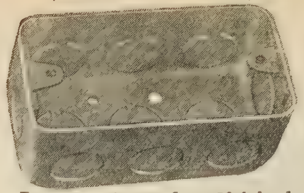
When ordering specify size of fixture stem to be used.

Approximate weight, 51 pounds. Price includes plugs.

Cat. No.......	1891	1892	1893	1894	1895	1896
No. Circuits...	1	2	3	4	5	6
Each..........	$78.00	80.40	82.80	85.20	87.60	90.00

No. 2020 National Flush Device Boxes

Rounded Corners—½-Inch Knockouts for Conduit

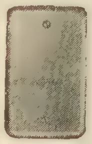


This box is 4⅛ inches long, 2⅛ inches wide and 1⅞ inches deep outside, with 1 knockout in each end, 3 in each side and 3 in bottom for ½-inch conduit. There are 2 nail holes in bottom.

Lugs are tapped on $3\frac{9}{32}$-inch centers for all standard makes of push-button and rectangular rotary switches and flush convenience outlets. Sherardized or black enamel.

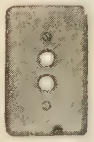
Cat. No.	Per 100	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
2020	$22.00	Flush Device Box, Complete....	100	73

National Steel Covers for No. 2020 Solid Device Box



Covers fit other makes of similar utility type boxes. Slightly countersunk or flanged and rounded on the corners. Sherardized or black enameled finish.

No. 20-A



Blank steel cover.

Cat. No.	Per 100	Size Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
20-A	$9.50	$3\frac{3}{16}$x$4\frac{3}{16}$	100	15

No. 20-B

Steel cover for double push switch.

20-B	$16.00	$3\frac{3}{16}$x$4\frac{3}{16}$	100	14

No. 20-C

Steel cover for standard duplex receptacle.

20-C	$16.00	$3\frac{3}{16}$x$4\frac{3}{16}$	100	12

No. 20-E

Steel cover for standard square handled toggle switch.

20-E	$15.50	$3\frac{3}{16}$x$4\frac{3}{16}$	100	14

No. 20-F

Steel cover for single T slot and Edison base receptacles.

20-F	$16.00	$3\frac{3}{16}$x$4\frac{3}{16}$	100	13

No. 1601 National Economy Bar Lath Supports

Where outlet boxes mounted on steel bars are installed between joists or studding, the Economy Bar Lath Support holds the loose ends of the lath firmly in place. It fits over the bar through a punched hole in the bottom of the support and will slide back and forth to any position. The lath slides between the top and bottom flanges, making a rigid support and preventing the plaster around the box from breaking away.

Cat. No.	Carton	Std. Pkg.	Wt., Lbs. per 100	Price per 100
1601	100	1000	7	$4.00

GraybaR QUALITY
Everything Electrical
GraybaR ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

Economy Bar Hangers

Will Fit Any Box Having ½-Inch Center Knockout
With ⅜-Inch Stud
Straight Bar Hanger

For shallow boxes in new work or for holding boxes to concrete forms. With ½-inch deep boxes where bar is nailed to joists or studding, edge of box will be flush with ordinary plaster.

Cat. No.	Length Bar, In.	Unit Pkg.	Wt., Lbs. Unit Pkg.	Price per 100
2263	18	100	62	**$13.50**
***2263-L**	24	100	72	25.00

Shallow Offset Bar Hangers

Hanger for 1½-inch deep boxes without switch covers or plaster rings; offset brings box edge flush with plaster.

Cat. No.	Length Bar Inches	Depth Offset Inches	Unit Pkg.	Wt., Lbs. Unit Pkg.	Price per 100
2265	19½	1 1/16	50	33	**$16.50**

Deep Offset Bar Hangers

For 1½-inch deep boxes with switch covers or plaster rings; offset brings ⅝-inch deep covers flush with plaster.

Cat. No.	Length Bar Inches	Depth Offset Inches	Unit Pkg.	Wt., Lbs. Unit Pkg.	Price per 100
2266	19½	1 11/16	50	35	**$17.50**

Old Work Bar Hangers

For mounting shallow boxes or plates in buildings already plastered. Make a small hole about 1½-inch in diameter; push bar all the way into hole, long end first as shown in cut; hold stud in one hand and pull wire with the other until bar is centered across hole.

Cat. No.	Length Bar Inches	Unit Pkg.	Wt., Lbs. Unit Pkg.	Price per 100
2267	12	100	35	**$13.50**

Box Cleats

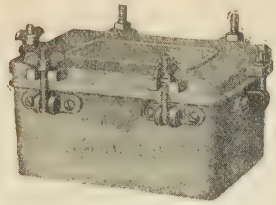
For 1½-inch deep boxes with covers and integral studs, or without studs. Offset has slots for stove bolts to hold box, and is right depth to bring ⅝-inch covers flush with the plaster.

Cat. No.	Length Bar Inches	Depth Offset Inches	Unit Pkg.	Wt., Lbs. Unit Pkg.	Price per 100
2268	21	1 11/16	50	30	**$11.50**

*Special length bars over 24 inches, add 60 cents per 100 to price for each additional inch.

For ½-inch studs, $1.20 per 100 extra.

T & B Weatherproof Type Cast Iron Junction Boxes



A sturdy box built for rugged service. A hinged cover, supplied with thumb nuts on all four sides, makes a watertight, weatherproof job when tightened.

Furnished with gasket as standard equipment.

Boxes are listed in black japan finish.

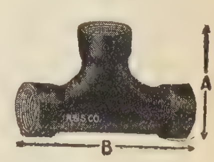
Cat. No.	Complete Each Japanned	Size Inches W. L. D.	Weight, Pounds Box	Weight, Pounds Cover
10500	**$6.00**	4x 6x 4	5	2
10502	**7.80**	6x 6x 4	10	3
10503	**8.00**	6x 8x 4	15	4
10505	**8.60**	6x12x 3	10.2	5.5
10507	**7.50**	7x 9x 3	8	5
10509	**8.00**	8x 8x 4	9	5
10510	**8.20**	8x 8x 5	10.3	5
10511	**9.00**	8x 8x 6	10.3	4.5
10512	**10.00**	8x10x 4	16	4
10513	**15.00**	8x14x 5	21	12
10514	**20.00**	8x18x 6	27	11
10515	**10.50**	10x10x 4	13.2	8.2
10516	**12.00**	10x10x 6	16.2	8
10517	**11.20**	10x12x 4	14	10
10519	**17.00**	10x14x 6	24	10
10520	**17.50**	10x18x 4	23	13
10522	**14.00**	12x12x 4	16	10
10523	**18.00**	12x16x 4	27	15
10524	**21.00**	12x16x 6	40	15
10535	**72.00**	12x16x 8	160	26
10525	**48.00**	12x24x 7	70	29
10527	**32.00**	16x20x 6	64	26
10528	**36.00**	18x18x 6	73	29
10529	**44.00**	18x18x10	100	32
10530	**40.00**	18x24x 6	83	42
10531	**72.00**	18x36x 8	173	70

R & S Floor Outlets

Elbows, Tees and Adjustable Tops

Future requirements for service connections may be anticipated by systematically studding the floor with these outlets, all radiating from one or more pull boxes, from which any changes or additions may subsequently be made by the pulling of wires. The complete outfit consists of a galvanized iron long radius conduit fitting, and brass adjustable top with water-tight cap, which can be raised or lowered to meet the final surfacing of floor.

Elbow

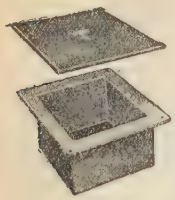


Tee

Size Conduit In.	Dimen., In. A	Dimen., In. B	Elbows Cat. No.	Elbows Wt. Lbs.	Elbows Price Each	Tees Cat. No.	Tees Wt. Lbs.	Tees Price Each
½	2⅝	4	**1900**	¾	**$1.00**	**1905**	⅞	**$1.60**
¾	3 1/16	4⅝	**1901**	1	**1.30**	**1906**	1¼	**1.90**
1	3¼	4¾	**1902**	1⅛	**1.60**	**1907**	1½	**2.40**
1¼	4½	5⅜	**1903**	3	**2.80**	**1908**	4¼	**5.00**
1½	5 7/16	6	**1904**	4¼	**5.00**	**1909**	5½	**7.00**
2	7 3/16	10¾	**1914**	8¾	**8.30**	**1910**	13¾	**11.00**

Adjustable Tops

Cat. No.	Size Conduit and Cap In.	Vertical Adjustment In.	Dimen., In. A	Dimen., In. B	Approx. Wt., Lbs. Each	Price Each
1915	½	½	1¼	1 3/16	¼	$ 1.00
1916	¾	½	1¼	1 3/16	⅜	1.20
1917	1	½	1 5/16	1¾	½	2.00
1918	1¼	¾	1 9/16	2⅛	¾	4.00
1919	1½	¾	1¾	2½	1	5.00
1920	2	¾	2 3/16	3⅜	2	8.80

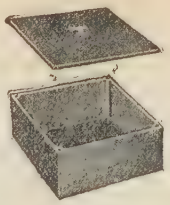


Flanged

T & B Cast Iron Junction Boxes and Covers

Sizes other than those listed can be furnished.

Add 25% net for hot dip galvanizing.



Unflanged

Flanged Type

Cat. No.	Box Only	Box and Cover	Gasket Each	Size, Inches W.	L.	D.	Wt., Lbs. Complete
	Japanned, Each						
10895	$1.40	$2.00	$.30	4x	4x	3	3.8
10756	2.00	2.60	.30	4x	4x	4	3.8
10914	2.80	3.60	.40	4x	6x	3	7
10899	3.60	4.80	.60	4x	8x	3	12.6
10757	3.80	5.40	.70	4x	12x	4	10.8
10897	2.50	3.70	.60	6x	6x	3	9
10898	3.40	4.70	.60	6x	6x	4	8
10915	3.80	5.10	.60	6x	6x	6	14
10900	4.60	6.00	.70	6x	8x	3	14
10902	4.30	5.70	.70	6x	8x	4	15
10916	5.00	6.40	.70	6x	8x	6	15.5
10908	7.20	9.20	1.00	6x	12x	4	19
10910	10.80	12.80	1.00	6x	12x	6	24
10901	6.00	8.00	.90	8x	8x	3	14
10903	6.20	8.20	.90	8x	8x	4	16
10904	7.30	9.30	.90	8x	8x	6	18
10763	7.80	9.80	.90	8x	8x	8	20
10764	10.00	13.00	1.00	8x	12x	6	28
10905	11.10	14.30	1.00	10x	10x	8	104
10907	9.00	13.00	1.20	12x	12x	3	41
10909	9.00	13.00	1.20	12x	12x	4	45
10911	14.00	18.00	1.20	12x	12x	6	52
10769	20.00	24.00	1.20	12x	12x	12	96
10771	32.00	37.50	1.40	12x	18x	12	130
10785	34.00	42.00	3.00	12x	24x	12	113
10778	31.00	44.00	3.00	18x	18x	8	140
10780	66.00	94.00	4.00	24x	30x	12	360
10781	110.00	172.00	4.50	30x	30x	12	455
10782	180.00	290.00	6.00	30x	48x	12	910

Unflanged Type

10861	$.90	$1.20	$.20	4x	4x	2	2.5
10862	1.00	1.30	.20	4x	4x	3	3.5
10700	1.70	2.00	.20	4x	4x	4	5
10866	1.50	2.00	.30	4x	6x	2	5.5
10703	2.20	2.70	.30	4x	6x	4	7.75
10863	1.60	2.10	.40	5x	5x	3	6
10867	1.60	2.00	.50	5x	6x	3	6
10894	1.70	2 40	.50	6x	6x	2	6.5
10962	1.70	2.40	.50	6x	6x	3	7.5
10868	2.60	3.30	.50	6x	6x	4	8.5
10963	3.50	4.20	.50	6x	6x	5	12.5
10964	3.70	4.40	.50	6x	6x	6	14.5
10871	2.70	3.60	.60	6x	8x	3	10.5
10872	3.10	4.00	.60	6x	8x	4	10.5
10874	4.60	5.50	.60	6x	8x	6	15.5
10878	5.40	6.70	.90	6x	10x	4	15
10968	4.70	6.70	1.00	6x	12x	4	21
10882	8.00	10.00	1.00	6x	12x	6	27
10711	15.00	18.00	2.00	6x	18x	6	25
10870	2.80	3.60	.60	7x	7x	3	11
10965	4.00	5.20	.80	8x	8x	3	13.5
10873	4.00	5.20	.80	8x	8x	4	13
10717	9.00	10.20	.80	8x	8x	8	23
10714	5.00	6.80	1.00	8x	10x	4	20
10855	6.20	8.00	1.00	8x	10x	6	15.5
10715	10.00	11.80	1.00	8x	10x	8	32
10718	10.00	12.00	1.20	8x	12x	6	37
10853	5.30	6.80	1.10	9x	9x	4	5
10852	5.40	7.00	1.20	10x	10x	5	14
10726	7.40	9.00	1.20	10x	10x	6	17
10728	7.00	10.00	1.60	12x	12x	3	27
10881	7.50	10.50	1.60	12x	12x	4	32
10969	9.60	12.60	1.60	12x	12x	6	46
10729	12.00	15.00	1.60	12x	12x	8	39
10732	19.50	24.00	2.00	12x	18x	6	68
10733	22.00	26.50	2.00	12x	18x	10	97
10883	24.00	31.00	3.00	14x	14x	10	107
10742	24.00	32.00	2.50	18x	18x	5	106
10743	21.00	29.00	2.50	18x	18x	6	117
10744	29.00	37.50	3.50	18x	24x	6	168
10746	48.00	62.00	4.00	24x	24x	8	265

Typical Square-Duct Installations

Fig. 1

Fig. 1 is a down-view showing how the use of 4 vertical elbows makes it possible to cross over or to bridge another section of wiring trough. The use of 2 of these fittings makes it possible to drop to a lower level whenever desirable. In this view, the wiring trough sections are mounted to the side wall by means of bracket hangers.

Fig. 2 illustrates the use of the telescope fitting, the drop hanger, the junction box and connecting a wiring trough section to the power panel.

By looking carefully at the bottom of the telescope fitting, you will notice a cutaway view showing how the use of the panel fitting collar provides a smooth surface over which wires can be drawn without trouble.

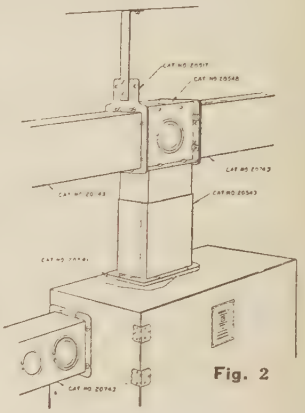


Fig. 2

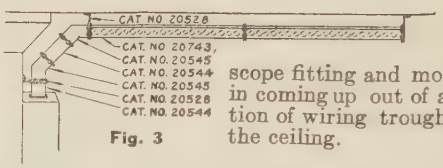


Fig. 3

Fig. 3 illustrates the use of elbows, telescope fitting and mounting brackets, in coming up out of a panel to a section of wiring trough suspended from the ceiling.

Using one of the many knockouts in the wiring trough to make a connection to a switch.

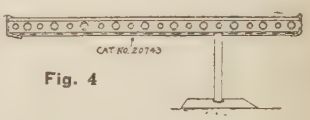


Fig. 4

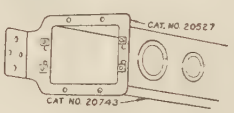


Fig. 5

Illustration shows how a bracket hanger is used to mount a section of trough to the sidewall.

Fig. 6 shows the use of the T fitting in a section of trough. The use of this fitting permits the connection to another section of trough running at right angles, to a junction box, or to make a right angle connection when the joints are not conveniently located.

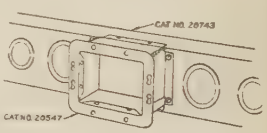


Fig. 6

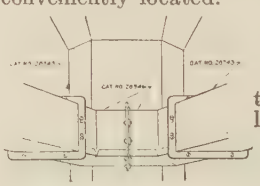


Fig. 7

Illustration shows the use of two 45° elbows, passing a column located in a corner.

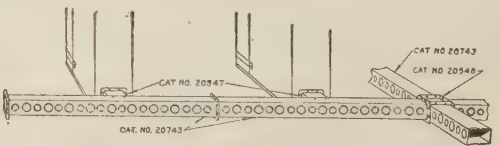
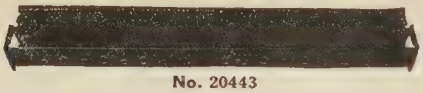


Fig. 8

Fig. 8 shows one method of using Square Duct trough to connect power panels in one common gutter. It also illustrates the use of the junction box as a cross fitting.

Square-Duct and Fittings



No. 20443

This is a steel enclosed wiring trough for distribution wires. The trough is flanged at both ends and provided with screws so that the trough can be fastened to the power panel cabinet or so that 2 or more sections of trough can be clamped together. The cover is hinged to the trough and is provided with spring latches for fastening in closed position. Knockouts are provided in the sides and back for (½, ¾, 1 and 1¼-inch) conduit. Knockouts 9/32-inch diameter are provided in both sides and back of wiring trough so that for surface mounting the small knockout can be knocked out to provide mounting holes for ¼-inch screws or bolts.

Cat. No.	Each	Size Inches	Length Feet	Cat. No.	Each	Size Inches	Length Feet
20241	$1.70	2½x2½	1	20441	$2.30	4x4	1
20242	2.00	2½x2½	2	20442	3.00	4x4	2
20243	3.20	2½x2½	5	20443	5.00	4x4	5

Universal Drop Hanger

For suspending wiring trough from overhead. Provided with screws and nuts.

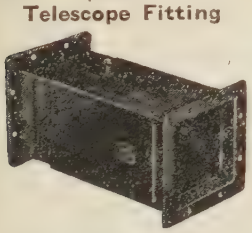
Cat. No.	Each	Size Inches
20217	$.20	2½x2½
20417	.30	4 x4

Reducing Fitting

For joining 4x4-inch to 2½x2½-inch duct.

20422 $.40 .....

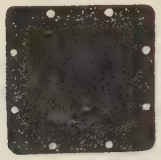
Telescope Fitting



Slide arrangement for making connections to duct fittings at varying distances. The 2½x2½-inch size extends from 7½ to 12 inches; 4x4-inch size from 8 to 12 inches.

20244 $2.00 2½x2½
20444 2.80 4 x4

Closing Plate



To close end of section or any side of junction box. With knockouts.

20216 $.36 2½x2½
20559 .40 4 x4

Universal Bracket Hanger

For mounting wiring trough on side wall.

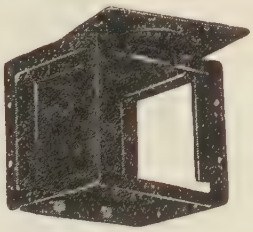
Cat. No.	Each	Size Inches
20227	$.20	2½x2½
20427	.30	4 x4

Panel Fitting Collar

For connecting duct to panels. By cutting hole size of duct in panel box and clamping box wall between panel fitting collar and duct collar, a solid, smooth connection is made.

20221 $.36 2½x2½
20421 .40 4 x4

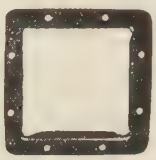
Junction Box



To form T, L or cross. Price includes two closing plates. Removable cover.

20248 $1.70 2½x2½
20448 2.00 4 x4

Trough Collar

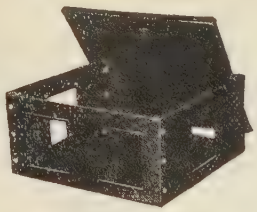


Used when necessary to cut standard duct.

20240 $.30 2½x2½
20440 .40 4 x4

Square-Duct Fittings

Pull Box

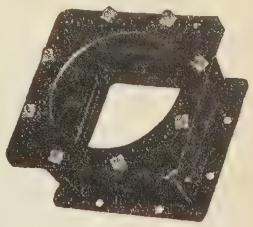


For 4x4-inch duct only.

Box price does not include closing plates for unused openings. (See No. 20559.)

Cat. No.	Each	Size Inches
20558	$12.00	.....

Box Fitting

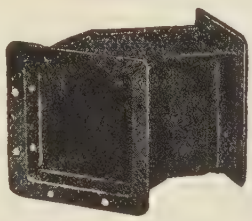


For connecting duct to panels, pull boxes, etc. One end fits round hole in box, the other end matching duct collar.

Cat. No.	Each	Size Inches
20249	$1.80	2½x2½
20449	2.60	4 x4
*20467	2.60	4 x4

*For 4x4-inch square hole in box or panel cabinet.

Elbows



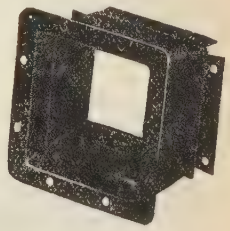
22½° Elbows

20255 $2.00 2½x2½
20455 3.00 4 x4

45° Elbows

20245 $2.00 2½x2½
20445 3.00 4 x4

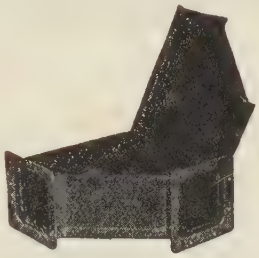
T Fitting



For T connection. Cut hole inside of duct and drill holes to match holes in flange on narrow end of fitting.

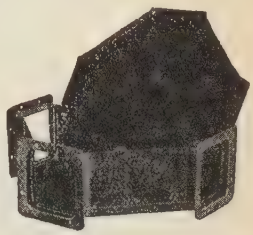
20247 $1.70 2½x2½
20447 3.00 4 x4

90° Elbow and Pull Box



20472 $6.00 4 x4

T Fitting and Pull Box



20471 $7.00 4 x4

Enclosed Cut-Outs

No. SK-2191 Attached to Square-Duct

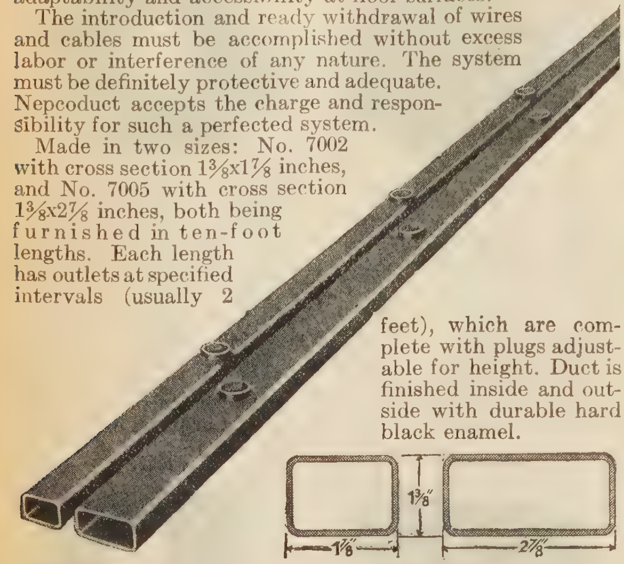
Cat. No.	Description	With Cut-Out Each
SK-2191	30 Amp., 600 V., 3-Pole Cut-Out in Box.....	$6.20
SK-2192	60 Amp., 600 V., 3-Pole Cut-Out in Box.....	7.30

Nepcoduct Under Floor Wiring System

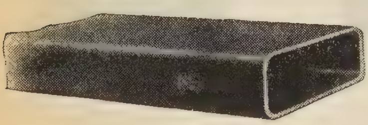
Convenience outlets arranged for in circuit wiring systems, under floors, must of necessity be of very definite and rugged design and construction—but the prime importance is adaptability and accessibility at floor surfaces.

The introduction and ready withdrawal of wires and cables must be accomplished without excess labor or interference of any nature. The system must be definitely protective and adequate. Nepcoduct accepts the charge and responsibility for such a perfected system.

Made in two sizes: No. 7002 with cross section 1⅜x1⅞ inches, and No. 7005 with cross section 1⅜x2⅞ inches, both being furnished in ten-foot lengths. Each length has outlets at specified intervals (usually 2 feet), which are complete with plugs adjustable for height. Duct is finished inside and outside with durable hard black enamel.

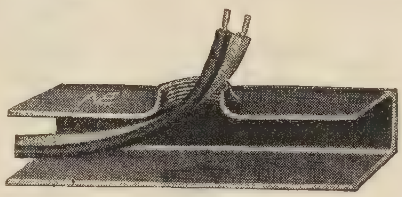


No. 7002 **No. 7005**

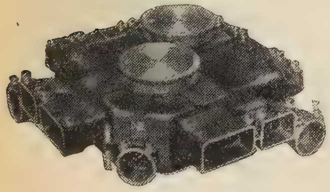


Rounded Bull Nose or filleted corners of Nepcoduct reduce tendency to cracking of concrete and surface floor materials.

Sweeping curve from inside of Nepcoduct up to rim of outlet makes pulling of wires easy, and safeguards insulation against abrasion.



Floor Junction Boxes



Nepcoduct 4-way floor junction box No. 7542–45 is in reality, two boxes and two sets of crossovers, in a one-piece casting of gray iron—one box and crossover to be used for high potential, and the other box and cross-over for low potential. No communication is to be had between the low and high potential boxes.

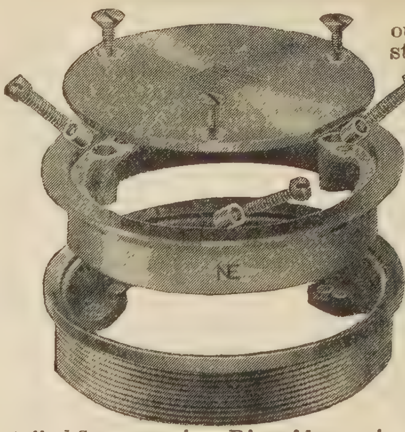
Box capacity is unusually large to accommodate splices and terminal blocks, unobstructed by cross-overs. Box is finished inside and out with black enamel.

It is levelled, regardless of uneven surfaces, by adjustment of three long set screws located around edge upon which box rests.

Two outlet assemblies installed in box above are the standard outlet and cover. Unused duct openings in box are to be closed with duct opening plug and unused openings for conduit are to be closed with conduit opening plug and adapter.

Single compartment underfloor junction boxes are available; box No. 7542 has six openings for 1⅜ inch x 1⅞ inch Nepcoduct, and two openings for 1¼ inch conduit; box No. 7545 has four openings for 1⅜ inch x 2⅞ inch Nepcoduct, and two openings for 1¼ inch conduit. These boxes are for installation in Single Duct Systems, and take the same size and type floor outlets as the large two compartment box.

Nepcoduct Under Floor Wiring System
Floor Junction Boxes
Standard Outlet and Cover for Linoleum, Rubber Tile, Cork Tile, Carpet



This junction box outlet assembly is the standard for all floor junction boxes.

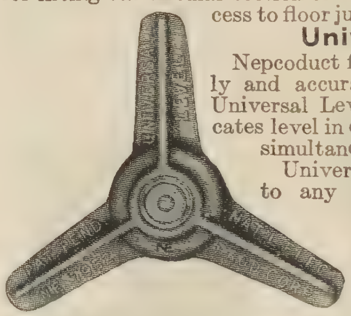
The assembly is installed flush with surface of finished concrete or wood floors. When floor coverings are used, however, the brass ring is forced up, using novel arrangement of screws. Floor covering is then cut to fit around brass ring, and it is replaced in position and drawn down flush with newly installed floor covering. Rim of brass ring holds floor covering down securely, and renders the box waterproof.

Special Outlet and Cover for Marble and Wood Flooring

When this junction box outlet assembly is installed, only rim of adjusting ring and head of elevating screw are visible through marble or wood floor.

Adjustment is made for thickness of marble or wood, by turning adjusting ring down into floor junction box, so that top rim is set level with finished surface. Brass cover fastens inside adjusting ring with small screws shown, and there is ample depth above it for filling in with floor material.

A circular section of marble or wood is placed inside adjusting ring and is secured in position by turning down elevating screw. Threaded collar on elevating screw provides means for lifting out circular section of marble or wood to gain access to floor junction box.



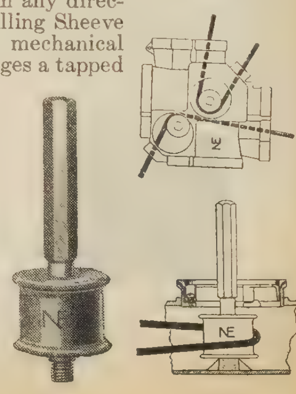
Universal Levels

Nepcoduct floor junction box is quickly and accurately levelled by use of Universal Level, No. 7952, which indicates level in every horizontal direction simultaneously.

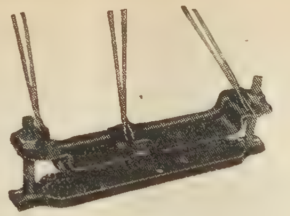
Universal Level may be applied to any article which is to be brought to a level position on more than one horizontal line.

Wire Pulling Sheeves

Wires and cables can be pulled through Nepcoduct floor junction box at any angle, from any direction with use of the Cable Pulling Sheeve No. 7970, as indicated in the mechanical drawings. Shaft of sheeve engages a tapped boss in bottom of the junction box. A spider fits upper part of box, and a jam nut locks the whole assembly into position to insure rigidity when sheeve is in use. Wires can be pulled from lower entrance of ducts to upper entrance (in high potential compartment), and around any required bend without adjustment. In low potential compartment, there is no difference of elevation in duct entrances.



Nepcoduct Under Floor Wiring System
Adjustable Duct Saddle Supports



Double duct saddle support is a valuable labor saving device, it eliminates errors of position, a costly labor item. Every part of Nepcoduct system is laid out when base members of saddle support are installed, all other parts of system having definite relation to them. Slight projection of base members from floor arch, and their rugged construction make them stand up under abuse of wheelbarrows and mud buggies, and conditions of normal construction operations. Saddle support holds Nepcoduct down as well as up and keeps it from floating in wet concrete fill.

No. 7425, for large and small Nepcoduct.
No. 7422, for two lines of small Nepcoduct.

Adjustment is made for height of Nepcoduct by spinning adjustment nuts up or down on bolts. Both lateral and longitudinal adjustments of duct are easily made.

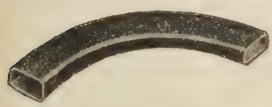
Saddle slips into place when adjusting nuts are loose. Saddle is rigid with base member when adjusting nuts are locked above and below it.

Base members of saddle support are installed on floor as early as possible, to indicate lines of Nepcoduct, thus avoiding interference of other trades' work.

Seats in saddle for duct are stamped accurately, and hold ducts in proper relation to each other, as well as to the finished floor.

Tie wires, when twisted over top of ducts, hold them firmly in saddle.

Elbows and Offsets



90° Flat Floor Elbows
Long Radius

No. 7215 for large Nepcoduct.
No. 7212 for small Nepcoduct.

90° Vertical Wall Elbows
Long Radius

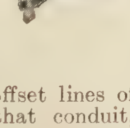
Can be used as shipped, or sawed in sections as indicated by 2 illustrations on the right, to meet requirements of situation.

No. 7225, for large.
No. 7222, for small.

90° Vertical Wall Elbows
Short Radius

No. 7235, for large Nepcoduct.
No. 7232, for small Nepcoduct.

Duct End Outlets
With Height Adjusting Screw



Fits on end of Nepcoduct and receives standard duct outlet plug.

No. 7725, for large Nepcoduct.
No. 7722, for small Nepcoduct.

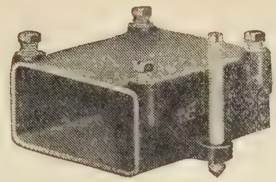
Cross-Under Offsets

Designed to offset lines of Nepcoduct so that conduit, pipe, or other lines of duct can cross within floor thickness.

No. 7325, for large.
No. 7322, for small.

Nepcoduct Under Floor Wiring System
Miscellaneous Fittings

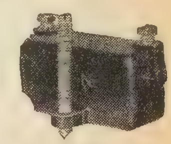
Couplings
With Height Adjusting Screw



No. 7165 for large Nepcoduct.

No. 7162 for small Nepcoduct.

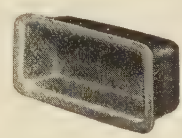
Duct End Blanks
With Height Adjusting Screw



No. 7715 for large Nepcoduct.

No. 7712 for small Nepcoduct.

Duct Opening Plugs

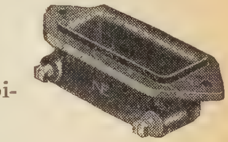


No. 7745 for large Nepcoduct.

No. 7742 for small Nepcoduct.

Closes unused duct openings in floor junction box. Easily removed by gripping middle vertical partition with pliers.

Connectors—Duct to Cabinet

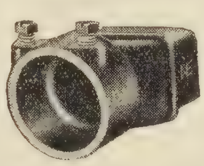


No. 7755 for large Nepcoduct.

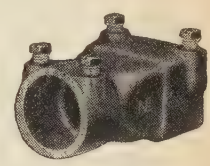
No. 7752 for small Nepcoduct.

Takes Nepcoduct runs into wall cabinet.

Adapters—Duct to Conduit



No. 7732 and No. 7762

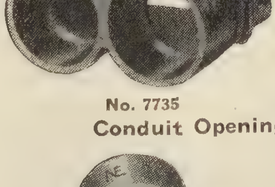


No. 7762-F

No. 7732 with male end to fit coupling for small Nepcoduct, and female opening for 1¼-inch conduit.

No. 7762 with male end to fit coupling for small Nepcoduct, and female opening for 1-inch conduit.

No. 7762-F with female end to fit small Nepcoduct, and female opening for 1-inch conduit.

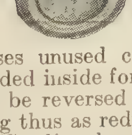


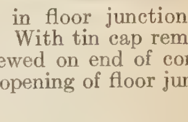
No. 7735

No. 7735 with male end to fit coupling for large Nepcoduct, and 2 female openings for 1¼-inch conduit.

Two openings for 1¼-inch conduit permit branching from duct to conduit with wiring up to full duct capacity.

Conduit Opening Plugs and Reducers



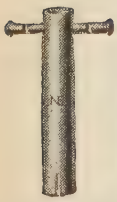


Closes unused conduit openings in floor junction box. Threaded inside for 1-inch conduit. With tin cap removed, it can be reversed end to end, screwed on end of conduit, serving thus as reducer in 1¼-inch opening of floor junction box. (See line drawing above.)

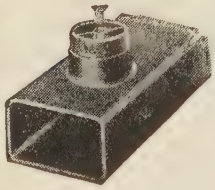
No. 7780 Conduit Opening Plug and 1¼ to 1-inch size reducer.

No. 7781 Conduit Opening Plug and 1¼ to ¾-inch size reducer.

Nepcoduct Under Floor Wiring System
The Evolution of an Outlet



No. 7950, Plug Removal Wrench End Fits Depressions in Top of Outlet Plug

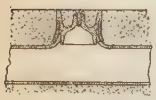


No. 7140, Floor Covering Escutcheon of Red Bronze

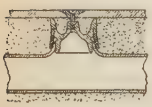
No. 7141, Floor Covering Escutcheon of Monel

No. 7143, Abandoned Outlet Plate

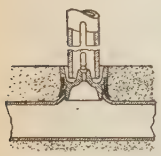
Type A Plug



Lines of Nepcoduct are embedded in concrete fill with plugs screwed down into duct outlets. Plugs may or may not be concealed by floor construction, and mark er screw can be elevated to show at floor when required.

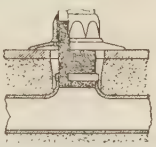


Rubber collar locks plug in adjusted position, protects plug threads from concrete, and seals the joint between plug and rim of duct outlet against entrance of moisture. When marker screw is to show through floor coverings of linoleum, rubber, cork tile or carpet, the escutcheon shown above is used to protect such floor coverings from fraying.

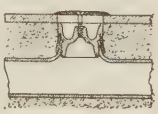


When duct outlet is to be used for service, it is necessary to remove small amount of concrete from top depression of plug in order to use the plug removal wrench. Plug can be readily screwed from the duct and concrete with plug removal wrench of which the socket end is shown.

Removal of plug leaves neat pre-formed passage through the concrete to duct outlet. Void in concrete around rim of duct outlet is a catch-all for dirt and small particles.

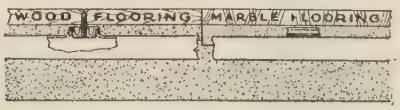


Service Extension Assembly No. 7910 directly engages the duct outlet without use of any forms of adapters, insuring positive protective grounding, as required in National Electrical Code. Stopping collar is sweated in place in manufacture, and serves as a gauge so that service extension pipe will always be turned into duct outlet to proper depth.



When outlet is abandoned, the plug is screwed again into duct outlet, and an abandoned outlet plate is pulled tight over opening in floor material, by tightening marker screw into plug.

Type B Plug



Type B plug, when adjusted, protrudes very slightly above top rim of duct outlet. This shallow plug is intended for use where duct is installed under wood or marble, as it is impracticable to cut a number of holes in the underside or through these materials to fit over a Type A plug protruding above level of concrete fill; when the Type B plug is used, holes need be cut only where duct outlet is to be used for service. Other outlets are located by marker screws, or by measurement.

Nepcoduct Under Floor Wiring System
No. 7921 Service Fittings

This fitting is used for either high or low potential service from the duct. It is entirely brass with the exception of required insulating bushings or terminal block which are completely housed within it. The service assembly presents a neat symmetrical appearance entirely consistent with the most pretentious office furnishings, and is very sturdy in construction.

Since the fittings will frequently occupy positions under desks or in foot space, they are purposely designed to be kick proof. They will stand any reasonable abuse in connection with exposed position. Ribs at two ends of opening prevent desk occupant's feet from injuring connection, ıttachment plug is sufficiently protected so that the feet will not strike the plug itself, thereby eliminating interruptions to service.

No. 7911 Service Heads

Service Head No. 7911 is a housing for duplex T-slot receptacle No. 7912 for high potential service, such as for lighting, or various electric driven office appliances; or housing for bushings for low potential service to telephones and various office signal systems. Can be assembled with double T-slot receptacle shown, for high potential service, in which standard attachment plugs are used, or with two bushings illustrated below, for low potential service.

Service Head Bushings

Fibre bushings which are clamped securely just inside outlets of service head when it is assembled. Designed to prevent contact and abrasion between edges of head outlets, and low potential wires.

No. 7913, ½-inch low potential service bushing.
No. 7914, 1-inch low potential service bushing.

No. 7910 Service Extension Assembly

Delivered fully assembled, as shown, is adjustable to accommodate floor thicknesses approximately 1 to 2 inches above the duct. The stopping collar is sweated in place to insure proper depth engagement with duct outlet. When service pipe is screwed into outlet to shoulder engagement, a very tight joint is effected. The floor flange is screwed down to a bearing on finished floor surface, further stabilizing extension assembly.

It is provided with holes for spanner wrench, so that by use of the wrench considerable pressure can be applied between floor flange and finished floor, giving an extraordinary strength to whole installation. Locking collar is jammed against floor flange by turning it down with other end of spanner wrench. Besides acting as a locknut for floor flange, it hides spanner wrench holes, and the unused threads on service extension pipe.

Service extension pipe itself has an unobstructed cross sectional area of 1 square inch through which to pull service wires. The whole service extension assembly is delivered fully assembled which saves field labor, and is adjusted easily for various floor thicknesses.

No. 7951 Service Extension Wrenches

Lugs on one end fit into holes in floor flange, for tightening it down against finished floor. Half octagon socket on other end fits around locking collar, for tightening it down against floor flange.

T & B Watertight Floor Boxes

Box is furnished with polarized receptacle plug.

Three outlets in sides and 2 in bottom for ½-inch rigid conduit or any connector with ½-inch threads.

Has 5 tapped holes for ½-inch conduit, 4 of these are plugged with watertight steel plugs.

Box is Tabolite finish, bronze cover.

Outside diameter: Box body (under flange), 2¾″; overall (face of plate), 3¾″. Outside height: Box body (under flange), 2⅝″; overall, including plate but not nozzle, 3″. Height of nozzle, 1¼″

Standard package, 25. Weight, 70 pounds.

No. **1700**, Box with 2-Wire Recp..................each **$4.00**
No. **1701**, Box with 3-Wire Recp................each **5.00**
No. **1702**, Box with 3-Wire Grnd. Recp..........each **5.00**
No. **1703**, Phone or Signal Floor Box, No Recp...each **3.00**

No. 8000 T & B Utility Outlets

10 Amperes, 250 Volts—15 Amperes, 125 Volts

An ideal convenience outlet for baseboards, plaster walls, mantles, etc.

Screws slip through keyhole slots in bottom of box. When tightened, box body, connector and convenience outlet become a rigid, compact unit.

Total height, 2¼ inches. Diameter body, 1⅝ inches; diameter plate, 2½ inches.

Tabolite finish.

Standard package, 50.

Price, No. **8000**..............................each **$1.00**

T & B Adjustable Watertight Floor Boxes

No. 1730, with Bell Nozzle

The bell nozzle is not standard equipment.

Adjustment range is ⅝-inch vertical and 10 degrees angular.

Minimum height of deep series boxes is 3⅞ inches; of shallow series, 3 inches. Cover plate is 4 inches in diameter.

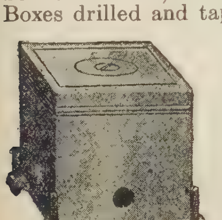
Unit package, 1; standard package, 10.

Description	Cat. No. Deep Series	Cat. No. Shallow Series	Each
Box with 2-Wire Receptacle...........	**1730**	**1760**	**$5.00**
Box with 3-Wire Receptacle...........	**1731**	**1761**	**5.50**
Box with 3-Wire Grounded Receptacle..	**1732**	**1762**	**5.50**
Tel. or Signal Box, No Receptacle.....	**1733**	**1763**	**4.00**

T & B Rectangular Gang Floor Boxes

Adjustable—Watertight

Combination ½ and 2-inch bronze disc with each gang is standard equipment. Receptacles and other accessories must be ordered separately. Two ½-inch drilled and tapped holes straight through each gang and one at each end of box is standard, with all but one hole in each gang plugged. Boxes drilled and tapped to specification, no extra charge.



No. 1810

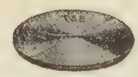
Adjustment, ⅝-inch vertical, 10 degrees angular.

Unit package is 1. Standard package is $60.00 net value.

Cat. No.	Each	No. of Gangs	Dimensions, In. Min. Ht.	Width	Lgth.
1810	**$5.00**	1	4⅞	4$\frac{5}{16}$	4$\frac{5}{16}$
1820	**10.00**	2	4⅞	4$\frac{5}{16}$	8⅜
1830	**15.00**	3	4⅞	4$\frac{5}{16}$	12$\frac{7}{16}$
1840	**20.00**	4	4⅞	4$\frac{5}{16}$	16½
1850	**25.00**	5	4⅞	4$\frac{5}{16}$	20$\frac{9}{16}$

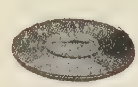
T & B Floor Box Accessories

For 1700, 1720, 1730, 1750 and 1760 Series

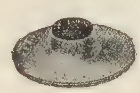


No. 1707 Disc

No. 1708 Nozzle



No. 1709 Disc



No. 1710 Reversible Disc

No. 1707

Bronze disc; standard equipment on entire 1700 series of boxes except 1703, 23, 33, 53 and 63.

No. **1707**...........each **$.25**

No. 1708

Bronze bushed outlet nozzle; standard equipment on 1700–1–2; 1720–1–2; 1750–1–2.

No. **1708**...........each **$.80**

No. 1709

Bronze disc with ½-inch hole, for telephone or signal work; standard equipment on 1703, 23, 33, 53 and 63.

No. **1709**...........each **$.80**

No. 1710

Bronze reversible disc with fiber bushing.

No. **1710**..........each **$1.00**

No. 1739

Bronze bushed triple nozzle.

No. **1739**..........each **$1.50**

***No. 1742**

Bushed extension piece, ½″ pipe size, 6″ long.

No. **1742**..........each **$1.70**

***No. 1745**

Two 2-wire receptacles (15 amperes 125 volts each) on extension ½″ pipe size, 6″ long.

No. **1745**..........each **$3.50**

No. 1739 Triple Nozzle

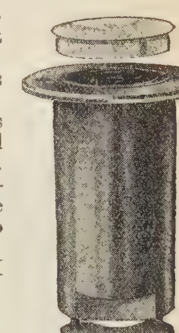
No. 1742 Extension Piece

No. 1745 Duplex Receptacle Extension

*Bushed extension piece can be furnished in any length. Extensions furnished in ¾ and 1-inch stock, any length.

Standard package, $60.00 net value. Accessories may be assorted with complete boxes to obtain standard package.

No. 499 Steel City Midget Floor Receptacles and Boxes



Provides smallest possible convenience outlet for work which does not have to be watertight.

A 10-ampere receptacle insulates wires from contact with box body.

Flange around top of box, 2⅝ inches in diameter; $\frac{3}{32}$ inch thick with beveled edge. Height of box, 3¾ inches overall.

Box Body furnished with ½ inch drilled and tapped hole in bottom complete with loom clamp held in place by two screws.

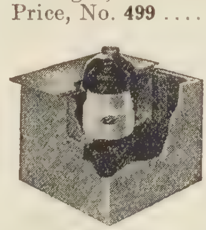
By removing loom clamp either a BX connector or rigid conduit can be used.

Standard package 25.

Weight, 11 ounces.

Price, No. **499**.............each **$2.40**

Fullman Non-Adjustable Type Floor Outlets



Designed to take a 25-ampere receptacle.

Inside dimensions of box body, 4x4x3½ inches deep. Standard bronze cover plate is ⅜ inch thick and 4⅞ inches square extending ¼ inch beyond edge of box body on all 4 sides; has 2-inch tapped hole in center for bell nozzle.

Cat. No.	Description	Wt. Lbs.	Price Each
495	Outlet with Bell Nozzle, without Receptacle..............................	6½	**$4.40**
496	Outlet with Bell Nozzle, Complete with 10-Ampere Receptacle Mounted on Flat Steel Ring............................	6¾	**5.50**
497	Outlet with Extra Large Bell Nozzle, 25-Ampere Receptacle, Mounted on Flat Steel Ring........................	7¼	**9.00**

Fullman Non-Adjustable Floor Outlets

No. 477

PATENTED AND PATENTS PENDING

No. 477

Sectional View of No. 477 Showing Receptacle Mounted on Steel Ring

Design and construction of the No. 477 is simple with few parts, small outside dimensions and plenty of room inside for wiring. Fitted complete with receptacle and bell nozzle. The receptacle is mounted on a flat steel ring which also serves as a seat for the bell nozzle or flush bronze plug. This construction permits use of only one rubber gasket.

Cover plate is 3½ inches in diameter with 2-inch opening for bell nozzle or flush bronze plug. Height is 3⅛ inches to top of cover plate.

Conduit holes: 1 in each side and 2 in bottom tapped for ½-inch conduit. Three of the holes are plugged with bronze plugs.

All bronze parts are brushed bronze finish. All iron and steel parts are sherardized to prevent rust.

Standard package, 25 complete outlets.

Complete outlet as described, consists of No. 481 box body, No. 478 porcelain plug, receptacle and flat steel ring, No. 484 rubber gasket, No 483 bronze cover plate, No. 480 flush bronze plug and No. 479 bell nozzle.

Weight, 2½ pounds.

Price, No. **477**....................................each **$4.00**

No. 490

No. 490

Complete outlet similar to No. 477, consisting of Nos. 481, 482, 484 and 487 parts listed below. Nos. 465 and 467 nozzles can be used in cover plate.

Weight, 1¾ pounds.

Price, No. **490**..........each **$2.60**

No. 491

Complete outlet same as No. 477, except furnished complete with 20-ampere polarized receptacle and plug and No. 466 bell nozzle.

Weight, 2¾ pounds.

Price, No. **491**..........each **$5.60**

Parts for Nos. 477, 490 and 491 Outlets

Cat. No.	Description	Wt. Oz.	Each
478	Porcelain Plug, Receptacle and Flat Steel Ring....................................	7	$1.10
479	Bronze Bell Nozzle..........................	2	1.10
480	2-Inch Flush Bronze Plug for No. 483 Cover.	2	.70
481	Box Body Only..............................	20	1.60
482	Bronze Cover Plate with Plug...............	6	1.20
483	Bronze Cover Plate with Plug...............	4	1.60
484	Rubber Gasket	1	.24
487	½-Inch Flush Bronze Plug for No. 482 Cover	1	.60
492	20-Ampere Polarized Receptacle and Plug, Steel Ring, Bronze Cover Plate and Rubber Gasket for No. 491 Box..................	16	4.40

Fullman Adjustable Floor Outlets

PATENTED AND PATENTS PENDING

Cover plates are 4 inches in diameter, $\frac{9}{64}$ inch thick sheet bronze. The flange ring is ⅛ inch thick, making the total diameter of the top of box 4¼ inches.

The height of standard box is 3¾ inches over all. Other heights may be had by the following combinations:

No. 402 body with No. 406 adjusting ring, minimum over all, 4¼ inches; with No. 407, $4\frac{13}{16}$ inches; with No. 408, 5½ inches.

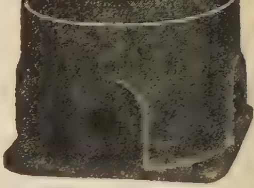
No. 404 body with No. 405 adjusting ring, minimum over all, $4\frac{3}{16}$ inches; with No. 406, 4⅞ inches; with No. 407, 5½ inches; with No. 408, $6\frac{3}{16}$ inches.

An adjustment of ½ inch higher may be had on each of these measurements in setting adjusting rings in the No. 476 cement. These boxes can be furnished special with shallow box body making minimum height 3¼ inches over all.

Conduit holes: Standard is 4 holes tapped for ½-inch conduit, 3 of which are plugged with brass plugs, making them water tight. Can be tapped for larger conduit without extra cost to meet requirements when sketches are furnished showing size and location of conduit holes. Only 1 conduit hole can be tapped in each of 4 sides of box bodies. Plugs larger than ½-inch charged for extra.

Receptacles are not furnished unless ordered.

No. 400, Complete



No. 401, Complete

No. 400

Complete standard outlet consisting of No. 402 box body tapped for ½-inch conduit, No. 405 combination adjusting ring and bronze flange ring, No. 409 bronze cover plate with No. 471 ½-inch bronze plug, No. 411 rubber gasket, and No. 476 sealing cement. Weight, 5 pounds.

Price, No. **400**....................................each **$5.20**

No. 401

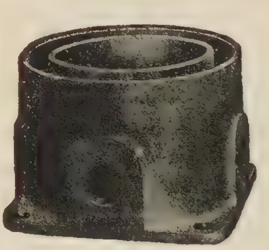
Complete standard outlet consisting of No. 402 box body tapped for ½-inch conduit, No. 405 combination adjusting ring and bronze flange ring, No. 410 bronze cover plate with No. 472 2-inch bronze plug, No. 414 steel plate, forming seat for No. 411 rubber gasket, and No. 476 sealing cement.

Weight, 5 pounds.

Price, No. **401**....................................each **$5.20**

At an extra cost, both Nos. 400 and 401 outlets may be had with the special No. 404 deep body box tapped for standard ½-inch conduit or tapped special to meet specified requirements. Special depth adjusting rings, Nos. 406, 407 and 408, can be furnished at extra cost.

Parts for Nos. 400 and 401 Outlets



No. 402 Body

No. 404 Body

No. 402 Standard Box Body

Standard tapping is 4 holes tapped for ½-inch conduit, 3 of which are closed with ½-inch bronze plugs. Can be tapped for ¾ or 1-inch conduit, when specified. Height over all, $3\frac{1}{16}$ inches; depth of groove, 1 inch; opening in top, 3¼ inches in diameter. Weight, 3½ pounds.

Price, No. **402**....................................each **$3.30**

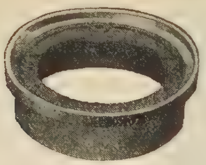
No. 404 Special Deep Box Body

Can be tapped for conduit up to 1½ inches with room for bushing inside or for 2-inch conduit without room for bushing. Height over all, 3¾ inches; depth of groove, 1 inch; opening in top, 3 inches in diameter. Weight, 6¼ pounds.

Price, No. **404**....................................each **$4.40**

Fullman Adjustable Floor Outlets

Separate Parts
Adjusting Rings



No. 405

The No. 405 adjusting ring is 1½ inches deep over all (standard). Deeper rings also furnished as per Nos. 406, 407 and 408. These rings give a range of adjustment of about 2½ inches. All are interchangeable.

Cat. No.	Description	Net Wt. Lbs., Ea.	Each
405	Standard Combination Adjusting Ring and Bronze Flange Ring, 1½ Inches Deep Over All	1	**$1.40**
406	Combination Adjusting and Bronze Flange Ring, 2⅛ Inches Deep	1¼	**1.50**
407	Combination Adjusting and Bronze Flange Ring, 2¾ Inches Deep	1½	**1.60**
408	Combination Adjusting and Bronze Flange Ring, 3⁷⁄₁₆ Inches Deep	1¾	**1.70**

No. 409 Bronze Cover Plates

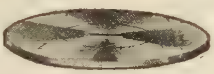
No. 409

No. 409 bronze cover plate has a diameter of 4 inches with ½-inch plug in center for Nos. 465 and 467 nozzles, No. 471 flush bronze plug or ½-inch pipe extension. Net weight, 9 ounces.

No. **409**....................each **$1.80**

No. 410 Bronze Cover Plates

No. 410 bronze cover plate has a diameter of 4 inches with 2-inch plug in center for No. 466 nozzle or No. 472 flush bronze plug. Net weight, 8 ounces.



No. 410

No. **410**....................each **$1.80**

No. 465 Nozzles

No. 465

No. 465 nozzle is threaded to fit a ½-inch conduit hole in No. 409 cover plate. The two openings are for wire extensions.

Net weight, 4 ounces.

No. **465**....................each **$1.50**

No. 466 Nozzles

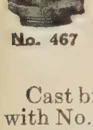
No. 466 nozzle is threaded to fit a 2-inch opening in No. 410 cover plate. This nozzle protects the porcelain plug from injury when inserted in receptacle.

Net weight, 3 ounces.

No. **466**....................each **$1.00**

No. 466

No. 467 Nozzles



No. 467

No. 467 nozzle is threaded to fit a ½-inch conduit hole in No. 409 cover plate.

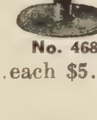
Net weight, 3 ounces.

No. **467**....................each **$1.00**

No. 468 Duplex Nozzles

Cast bronze combination duplex nozzle for use with No. 409 cover plate when duplex receptacle is used.

Can be furnished with 2 duplex receptacles allowing 4 connections at extra cost.



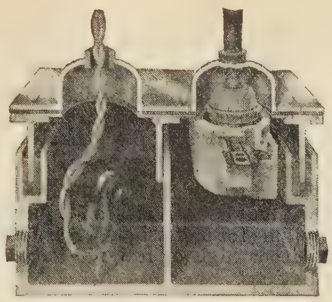
No. 468

No. **468**....................each **$5.00**

Miscellaneous Parts

Cat. No.	Description	Net Wt. Oz., Each	Each
411	Rubber Gasket	¼	$.20
471	½-Inch Flush Bronze Plug	½	.50
472	2 Inch Flush Bronze Plug	1	.60
476	Sealing Cement for One Outlet	4	.20

Fullman Gang Floor Outlets



This rectangular gang floor outlet is for supplying a variety of service, such as electric lights, fans, telephones, etc., from one point.

It makes a neater appearance than several single outlets grouped near a desk or table.

Lugs are provided in each section for flush type receptacles.

No. 459 cover plates are furnished standard for use with No. 466 bell nozzle. No. 458 cover plate may be substituted for one or more sections if desired for use with No. 465 or No. 467 nozzles or ½-in. pipe extension. Bronze edge frame extends around all cover plates.

Minimum height to top of cover plate is four inches. Box body only is 3¼ inches high. The cover of No. 441 outlet is 5½ inches by 4 inches over all. The cover of No. 442 outlet is 5½ inches by 7 inches over all. Each additional section adds three inches.

End sections are provided with three holes tapped for ½-inch conduit. Intermediate sections have two ½-inch tapped holes. Can be tapped for ¾-inch and 1-inch conduit with room for bushings or for 1¼-inch conduit without room for bushings. Sketches must be furnished showing size and location of conduit holes if special tapping is required.

All bronze parts furnished brushed bronze finish. All iron and steel parts sherardized to prevent rust.

Complete Outlets

Complete rectangular outlets are regularly furnished with No. 459 cover plates. Can be provided with No. 458 cover plates when specified.

Cat. No.	Each	No. of Gangs	Net Wt. Lbs., Each	Cat. No.	Each	No. of Gangs	Net Wt. Lbs., Each
441	$5.70	1	6¼	444	$22.80	4	21½
442	11.40	2	12	445	28.50	5	28
443	17.00	3	17¾	446	34.20	6	32

Bodies Only

Cat. No.	Each	No. of Gangs	Net Wt. Lbs., Each	Cat. No.	Each	No. of Gangs	Net Wt. Lbs., Each
447	$3.50	1	4	450	$14.00	4	14
448	7.00	2	7½	451	17.50	5	16½
449	10.50	3	11½	452	21.00	6	19

Adjusting Frames with Rubber Gasket and Bronze Edge Frame

Cat. No.	Each	No. of Gangs	Net Wt. Lbs., Each	Cat. No.	Each	No. of Gangs	Net Wt. Lbs., Each
488	$2.50	1	1½	455	$10.00	4	6
453	5.00	2	2¾	456	12.50	5	7½
454	7.50	3	4	457	15.00	6	8½

Bronze Cover Plates

Cat. No.	Description	Net Wt. Oz., Ea.	Each
458	For One Section of Gang Outlet with ½-Inch Flush Bronze Plug. Takes Nos. 465 and 467 Nozzles	7	$1.80
459	For One Section of Gang Outlet with 2-inch Flush Bronze Plug. Takes No. 466 Nozzle	7	1.80

Nozzles

465	Bronze Drip, for No. 458 Cover Plate	4	$1.50
466	Bronze Bell, for No. 459 Cover Plate	3	1.00
467	Bronze Stem, for No. 458 Cover Plate	3	1.00

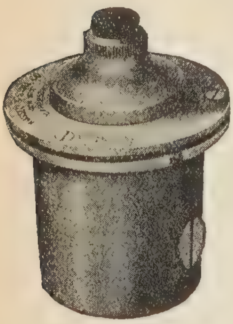
Brass Plugs

471	½-Inch Flush Bronze Plug	½	$.50
472	2-Inch Flush Bronze Plug	1	.60

Sealing Cement

476	For One Outlet or One Section of Gang Outlet	4	$.20

R & S Non-Adjustable Floor Boxes



A high grade floor box intended for use in wood flooring, easy to install and can be firmly secured.

Box is made of galvanized cast iron, floor plate of heavy brass and provided with suitable gaskets to make it watertight.

These fittings are furnished with or without receptacles and plugs, providing for uniformity when used for either high or low tension installations.

Height, 3¼ inches; diameter of floor plate, 3½ inches. Two ½-inch outlets on sides; two ½-inch outlets on bottom; three outlets plugged. Cannot be tapped for larger conduit. Receptacle and plug, 10 amperes 250 volts, furnished with No. 2580. All parts of these floor boxes are interchangeable and various available combinations of boxes and accessories can be furnished. Each box is packed in a strong carton.

No. 2580

Furnished complete with receptacle, cone nozzle and 2⅛-inch diameter flush cap. Weight, about 2½ pounds.

Price, No. **2580**....................................each **$4.00**

No. 2590

Plain box and cover with ½-inch pipe flush cap. Weight, about 1¾ pounds.

Price, No. **2590**....................................each **$3.00**

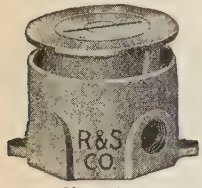
No. 2581

Furnished complete with 3-wire receptacle, plug, cone nozzle and 2⅛-inch diameter flush cap.

Weight, about 2½ pounds.

Price, No. **2581**....................................each **$5.00**

R & S Shallow Type Adjustable Floor Boxes



No. 2504

This floor outlet can be used with a 3-inch floor fill. It is designed and constructed along the same lines as the larger type box. All cast iron parts are galvanized and the adjustable flange and cap are of brass with a machined finish across the top.

The No. 2504 box is furnished complete with a tee slot receptacle, which will accommodate the standard type plug cap and will take the standard No. 2558 cone nozzle same as used in conjunction with the larger type floor boxes. Gaskets are provided to make this box watertight.

ADJUSTMENTS.—Ample angular and ⅜-inch vertical.

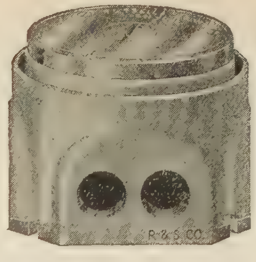
OUTLETS.—Maximum size, ¾ inch. When ordering specify outlets required.

Height, 2⅝ inches minimum. Diameter box, 3¼ inches. Diameter flange ring, 3⅜ inches.

Cat. No.	Description	Weight Pounds	Price Each
2504	Complete with Tee Slot Receptacle and 2⅛-Inch Diameter Flush Cap..........	2¾	**$5.50**
2505	Complete with ½-Inch Flush Cap but without Receptacle....................	2¾	**5.00**
2509	Special Tee Slot Receptacle for Use with No. 2504..............................	2 oz.	**.50**
2558	Cone Nozzle with Composition Bushing..	¼	**1.00**

R & S Adjustable Floor Boxes

Round Type



No. 2502

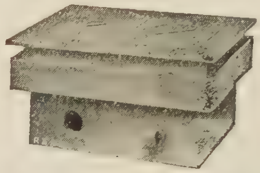
This box is of simple design, making it easy to install. Special adjustment and grounding feature eliminate the use of special cement. The box is ruggedly designed and equipped with a flange ring to prevent chipping of the finished floor.

Maximum size of outlets, 1 inch. When ordering, specify outlets required.

Cat. No.	Each	Description	Wt., Lbs.
2502	**$4.00**	With ½-In. Pipe Size Cap in Cover Plate	4
2503	**4.50**	With 2⅛-In. Pipe Size Cap in Cover Plate	4

Rectangular Gang Type

No. 2537 ½-Inch Cover Plate



No. 2512 with One No. 2537 and One No. 2538 Cover Plate

No. 2538 2⅛-Inch Cover Plate

Maximum size of outlets, 1½ inches. When ordering, specify outlets required.

2511	**$5.00**	Single Gang with No. 2537 Cover Plate..	7
2512	**10.00**	2-Gang with 2 No. 2537 Cover Plates...	12
2513	**15.00**	3-Gang with 3 No. 2537 Cover Plates...	15½
2514	**20.00**	4-Gang with 4 No. 2537 Cover Plates...	19½
2515	**25.00**	5-Gang with 5 No. 2537 Cover Plates...	31½

For No. 2538, 2⅛-inch cover plates, add 50 cents each.

R & S Combination Floor Extensions

10 Amperes, 250 Volts and Low Tension

No. 3000 Duplex Receptacle Outlet

These extensions are suitable for floor boxes and all underfloor-duct systems. Used in banks, offices, libraries, etc. for connection of desk lamps, dictaphones, adding machines, desk pads, telephones, etc.

Heavy bakelite interiors mounted in forged brass casing tapped for ½ or ¾-inch extension stem as desired. The stem is inserted in above mentioned systems.

No. 3008 Low Tension Outlet

Height, 6 inches over all. Furnished complete or in part. Standard finish is brush brass.

Cat. No.	Description	Wt. Lbs.	Price Each
3000	Complete 10-Ampere 250-Volt Duplex Combination Set..........................	1¼	**$5.00**
3008	Complete Low Tension Combination Set.	1¼	**4.00**
2696	10-Amp. 250-V. Duplex Head Only for ½-inch Stem..............................	¾	**3.00**
2697	10-Amp. 250-V. Duplex Head Only for ¾-inch Stem..............................	¾	**3.00**
2686	Low Tension Head Only for ½-inch Stem	¾	**2.00**
2687	Low Tension Head Only for ¾-inch Stem	¾	**2.00**
1921	3½-inch Extension Nipple, ½-inch Standard Pipe Size Threaded for Flange.....	¼	**.80**
1956	3½-inch Extension Nipple, ¾-inch Standard Pipe Size Threaded for Flange.....	¼	**.80**
2619	Lock Flange for 1921 Extension Nipple, ½-inch..................................	⅜	**1.20**
2620	Lock Flange for 1956 Extension Nipple, ¾-inch..................................	½	**1.20**

Extension nipples can be furnished any length desired. Prices upon application.

Obround Condulets

Schedule CR

Form 7

Take Form 7 covers or Form 7 wiring devices.

Cadmium-galvanized finish.

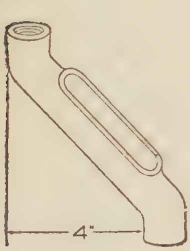
Type A

Cat. No.	Each	Size In.	Std. Pkg.
A17	$.24	½	100
A27	.31	¾	50
A37	.43	1	20
A47	.62	1¼	20
A57	.80	1½	10
A67	1.66	2	5
A77	4.20	2½	5
A87	5.00	3	5
A97	8.15	3½	5
A107	9.00	4	5
A0117	11.50	4½	1
A0127	14.00	5	1
A0147	20.25	6	1

Type C

C187	$.25	⅛	50
C287	.25	¼	50
C387	.30	⅜	50
C17	.36	½	100
C27	.41	¾	50
C37	.59	1	20
C47	.94	1¼	20
C57	1.22	1½	10
C67	2.43	2	5
C77	4.80	2½	5
C87	6.20	3	5
C97	9.00	3½	5
C107	11.00	4	5

Type CO

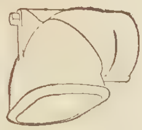


Type CO Condulet provides an offset of 4 inches in a conduit system.

CO17	$.50	½	50
CO27	.65	¾	50
CO37	.75	1	20
CO47	1.25	1¼	10
CO57	1.60	1½	10
CO67	3.25	2	5
CO777	5.20	2½	5
CO87	7.90	3	5
CO97	12.60	3½	5
CO107	13.80	4	5

Type B

One-Piece

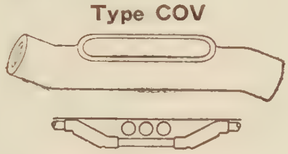


Two-Piece

One-Piece

Cat. No.	Each	Size In.	Std. Pkg.
B17	$.29	½	100
B27	.36	¾	50
B37	.50	1	20
Two-Piece			
B47	$1.25	1¼	20
B57	1.50	1½	10
B67	2.60	2	5
B77	4.20	2½	5
B87	5.60	3	5
B97	7.00	3½	5
B107	12.80	4	5
B0117	17.40	4½	1
B0127	18.20	5	1
B0147	22.80	6	1

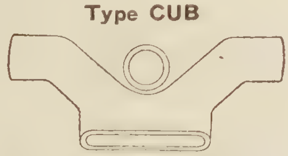
Type COV



Type COV Condulets connected by a nipple of suitable length form a convenient cross-over for two or more pipes or conduits.

Cat. No.	Each	Size Inches	Size, Pipe Crossed Over, Inches	Std. Pkg.
COV147	$.50	½	1¼	50
COV247	.65	¾	1¼	50
COV347	.75	1	1¼	20
COV457	1.25	1¼	1½	10
COV567	1.60	1½	2	10
COV677	3.25	2	2½	5
Use CO777	....	2½	3½	..
Use CO87	....	3	3½	..
Use CO97	....	3½	3½	..
Use CO107	....	4	3½	..

Type CUB



Type CUB Condulet provides a cross-over wherever it is necessary to bridge a single pipe or conduit.

CUB127	$.75	½	¾	25
CUB147	.85	½	1¼	25
CUB247	.95	¾	1¼	10
CUB347	1.40	1	1¼	10
CUB457	1.90	1¼	1½	10
CUB567	2.40	1½	2	10
CUB677	4.80	2	2½	5

Obround Condulets

Schedule CR

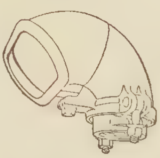
Form 7

Take Form 7 covers or Form 7 wiring devices.
Cadmium-galvanized finish.

Type E

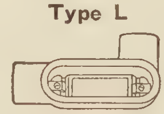
Cat. No.	Each	Size In.	Std. Pkg.
E17	$.29	½	100
E27	.35	¾	50
E37	.50	1	20
E47	.80	1¼	20
E57	1.04	1½	10
E67	2.14	2	5
E77	4.20	2½	5
E87	5.00	3	5
E97	8.15	3½	5
E107	9.00	4	5

Type F



F17	$ .50	½	100
F27	.80	¾	50
F37	1.25	1	20
F47	2.20	1¼	20
F57	3.25	1½	10
F67	5.00	2	5
F77	8.20	2½	5
F87	10.20	3	5
F97	18.10	3½	5
F107	25.00	4	5
F0117	32.00	4½	1
F0127	40.00	5	1
F0147	50.00	6	1

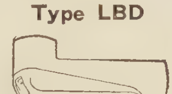
Type L



Double-faced condulet which may be used as an LL or LR condulet. Has two openings one furnished with a blank sheet steel cover.

L17	$.40	½	100
L27	.45	¾	50
L37	.65	1	20
L47	1.05	1¼	20
L57	1.40	1½	10
L67	2.50	2	5

Type LBD



Furnished with Blank Cast Feraloy Cover

Type LBD Condulet is intended for use when it is necessary to make a 90-degree bend in the conduit system.

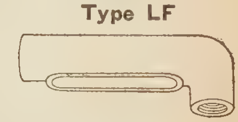
The Condulet is split, thus permitting a straight pull on the wires.

LBD1100	$.65	½	50
LBD2200	.80	¾	25
LBD3300	1.20	1	25
LBD011	35.00	4½	1
LBD012	40.00	5	1

Type LB

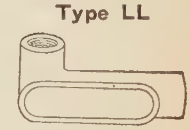
Cat. No.	Each	Size In.	Std. Pkg.
LB187	$.30	⅛	50
LB287	.30	¼	50
LB387	.35	⅜	50
LB17	.40	½	100
LB27	.45	¾	50
LB37	.65	1	20
LB47	1.05	1¼	20
LB57	1.40	1½	10
LB67	2.50	2	5
LB777	5.00	2½	5
LB87	6.50	3	5
LB97	10.50	3½	5
LB107	12.00	4	5
Use	LBD011	4½	..
Use	LBD012	5	..

Type LF



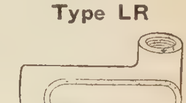
LF17	$.40	½	100
LF27	.45	¾	50
LF37	.65	1	20
LF47	1.05	1¼	20
LF57	1.40	1½	10
LF67	2.50	2	5
LF777	5.00	2½	5
LF87	6.50	3	5
LF97	10.50	3½	5
LF107	12.00	4	5

Type LL



LL187	$.30	⅛	50
LL287	.30	¼	50
LL387	.35	⅜	50
LL17	.40	½	100
LL27	.45	¾	50
LL37	.65	1	20
LL47	1.05	1¼	20
LL57	1.40	1½	10
LL67	2.50	2	5
LL777	5.00	2½	5
LL87	6.50	3	5
LL97	10.50	3½	5
LL107	12.00	4	5

Type LR



LR187	$.30	⅛	50
LR287	.30	¼	50
LR387	.35	⅜	50
LR17	.40	½	100
LR27	.45	¾	50
LR37	.65	1	20
LR47	1.05	1¼	20
LR57	1.40	1½	10
LR67	2.50	2	5
LR777	5.00	2½	5
LR87	6.50	3	5
LR97	10.50	3½	5
LR107	12.00	4	5

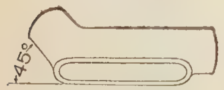
Obround Condulets

Schedule CR

Form 7

Take Form 7 covers or Form 7 wiring devices.
Cadmium-galvanized finish.

Type LBB

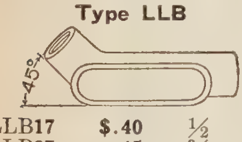


Cat. No.	Each	Size In.	Std. Pkg.
LBB17	$.40	½	100
LBB27	.45	¾	50
LBB37	.65	1	20
LBB47	1.05	1¼	20
LBB57	1.40	1½	10
LBB67	2.50	2	5
LBB777	5.00	2½	5
LBB87	6.50	3	5
LBB97	10.50	3½	5
LBB107	12.00	4	5

Type LFB

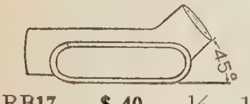
LFB17	$.40	½	100
LFB27	.45	¾	50
LFB37	.65	1	20
LFB47	1.05	1¼	20
LFB57	1.40	1½	10
LFB67	2.50	2	5
LFB777	5.00	2½	5
LFB87	6.50	3	5
LFB97	10.50	3½	5
LFB107	12.00	4	5

Type LLB



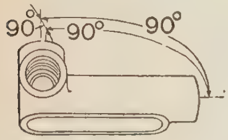
LLB17	$.40	½	100
LLB27	.45	¾	50
LLB37	.65	1	20
LLB47	1.05	1¼	20
LLB57	1.40	1½	10
LLB67	2.50	2	5
LLB777	5.00	2½	5
LLB87	6.50	3	5
LLB97	10.50	3½	5
LLB107	12.00	4	5

Type LRB



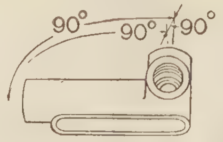
LRB17	$.40	½	100
LRB27	.45	¾	50
LRB37	.65	1	20
LRB47	1.05	1¼	20
LRB57	1.40	1½	10
LRB67	2.50	2	5
LRB777	5.00	2½	5
LRB87	6.50	3	5
LRB97	10.50	3½	5

Type LBL



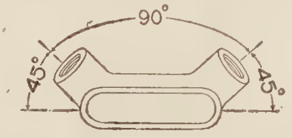
LBL17	$.65	½	50
LBL27	.80	¾	25
LBL37	.95	1	25
LBL47	1.25	1¼	10
LBL57	2.00	1½	10
LBL67	2.65	2	5
LBL77	6.55	2½	5

Type LBR



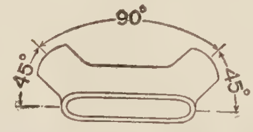
Cat. No.	Each	Size In.	Std. Pkg.
LBR17	$.65	½	50
LBR27	.80	¾	25
LBR37	.95	1	25
LBR47	1.25	1¼	10
LBR57	2.00	1½	10
LBR67	2.65	2	5
LBR77	6.55	2½	5

Type U



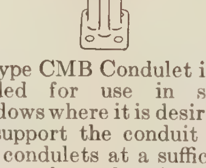
U187	$.33	⅛	50
U287	.33	¼	50
U387	.40	⅜	50
U17	.48	½	100
U27	.54	¾	50
U37	.78	1	20
U47	1.26	1¼	20
U57	1.68	1½	10
U67	3.00	2	5
U777	6.00	2½	5
U87	7.80	3	5
U97	12.60	3½	5

Type UB



UB187	$.33	⅛	50
UB287	.33	¼	50
UB387	.40	⅜	50
UB17	.48	½	100
UB27	.54	¾	50
UB37	.78	1	20
UB47	1.26	1¼	20
UB57	1.68	1½	10
UB67	3.00	2	5
UB777	6.00	2½	5
UB87	7.80	3	5
UB97	12.60	3½	5
UB107	14.40	4	5

Type CMB



Type CMB Condulet is intended for use in show windows where it is desirable to support the conduit line and condulets at a sufficient distance from the window to enable the use of angle type reflectors.

CMB17	$1.25	½	25
CMB27	1.40	¾	25

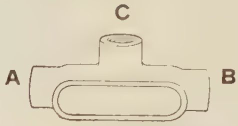
Obround Condulets

Schedule CR

Form 7

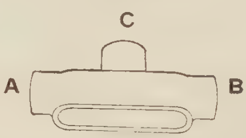
Take Form 7 covers or Form 7 wiring devices.
Cadmium-galvanized finish.

Type T



Cat. No.	Each	Size, Inches A	B	C	Std. Pkg.
T187	$.33	⅛	⅛	⅛	50
T287	.33	¼	¼	¼	50
T387	.40	⅜	⅜	⅜	50
T17	.48	½	½	½	100
T127	.56	½	½	¾	100
T137	.63	½	½	1	100
T217	.57	¾	¾	½	50
T27	.57	¾	¾	¾	50
T237	.65	¾	¾	1	50
T257	.90	¾	¾	1½	50
T317	.80	1	1	½	20
T327	.80	1	1	¾	20
T37	.80	1	1	1	20
T367	1.45	1	1	2	20
T417	1.22	1¼	1¼	½	20
T427	1.22	1¼	1¼	¾	20
T437	1.22	1¼	1¼	1	20
T47	1.22	1¼	1¼	1¼	20
T457	1.50	1¼	1¼	1½	20
T467	1.96	1¼	1¼	2	20
T517	1.69	1½	1½	½	10
T527	1.69	1½	1½	¾	10
T537	1.69	1½	1½	1	10
T547	1.69	1½	1½	1¼	10
T57	1.69	1½	1½	1½	10
T567	2.52	1½	1½	2	10
T617	2.55	2	2	½	5
T627	2.55	2	2	¾	5
T637	2.55	2	2	1	5
T647	2.55	2	2	1¼	5
T657	2.55	2	2	1½	5
T67	2.55	2	2	2	5
T7577	5.00	2½	2½	1½	5
T7677	5.00	2½	2½	2	5
T77	5.00	2½	2½	2½	5
T867	7.50	3	3	2	5
T87	7.50	3	3	3	5
T977	11.00	3½	3½	2½	5
T97	11.00	3½	3½	3½	5
T107	13.00	4	4	4	5

Type TB



TB187	$.33	⅛	⅛	⅛	50
TB287	.33	¼	¼	¼	50
TB387	.40	⅜	⅜	⅜	50
TB17	.48	½	½	½	100
TB27	.57	¾	¾	¾	50
TB237	.65	¾	¾	1	50
TB317	.80	1	1	½	20
TB327	.80	1	1	¾	20
TB37	.80	1	1	1	20
TB47	1.22	1¼	1¼	1¼	10
TB57	1.69	1½	1½	1½	10
TB67	2.55	2	2	2	5
TB77	5.00	2½	2½	2½	5
TB87	7.50	3	3	3	5
TB97	11.00	3½	3½	3½	5
TB107	13.00	4	4	4	5

Size of cover or wiring device is same as size of hubs at ends of cover opening.

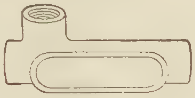
Obround Condulets

Schedule CR

Form 7

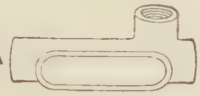
Take Form 7 covers or Form 7 wiring devices.
Cadmium-galvanized finish.

Type TL



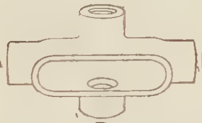
Cat. No.	Each	Size, Inches A	B	C	Std. Pkg.
TL17	$.48	½	½	½	100
TL127	.56	½	½	¾	100
TL137	.63	½	½	1	100
TL217	.57	¾	¾	½	50
TL27	.57	¾	¾	¾	50
TL237	.65	¾	¾	1	50
TL317	.80	1	1	½	20
TL327	.80	1	1	¾	20
TL37	.80	1	1	1	20
TL47	1.22	1¼	1¼	1¼	10
TL57	1.69	1½	1½	1½	10

Type TR



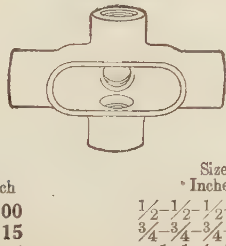
TR17	$.48	½	½	½	100
TR127	.56	½	½	¾	100
TR137	.63	½	½	1	100
TR217	.57	¾	¾	½	50
TR27	.57	¾	¾	¾	50
TR317	.80	1	1	½	20
TR327	.80	1	1	¾	20
TR37	.80	1	1	1	20
TR47	1.22	1¼	1¼	1¼	10
TR57	1.69	1½	1½	1½	10

Type X



Cat. No.	Each	Size, Inches A	B	C	D	Std. Pkg.
X17	$.60	½	½	½	½	75
X21117	.77	¾	½	½	½	50
X217	.77	¾	¾	½	½	50
X27	.77	¾	¾	¾	¾	50
X317	1.05	1	1	½	½	20
X327	1.05	1	1	¾	¾	20
X37	1.05	1	1	1	1	20
X417	1.40	1¼	1¼	½	½	20
X47	1.40	1¼	1¼	1¼	1¼	20
X527	1.78	1½	1½	¾	¾	10
X57	1.78	1½	1½	1½	1½	10
X67	3.50	2	2	2	2	5
X77	6.00	2½	2½	2½	2½	5
X87	10.00	3	3	3	3	5

Type XA



Cat. No.	Each	Size Inches	Std. Pkg.
XA17	$1.00	½-½-½-½-½	50
XA27	1.15	¾-¾-¾-¾-¾	50
XA37	1.45	1-1-1-1-1	25

Size of cover or wiring devices is same as size of hubs at ends of cover opening.

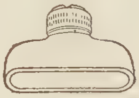
Obround Threadless Condulets

Schedule CR

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

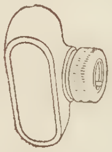
Cadmium-galvanized is the standard finish.

Type A

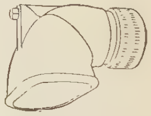


Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	For Thick Wall Conduit Each	For Thin Wall Conduit Cat. No.	For Thin Wall Conduit Each
½	100	A197	$.29	A147	$.29
¾	50	A297	.40	A247	.40
1	20	A397	.56	A347	.56
1¼	20	A497	.85	A447	.85
1½	10	A597	1.14	A547	1.14
2	5	A697	2.26	A647	2.26
2½	5	A797	5.20	....	....
3	5	A897	6.30	....	....
3½	5	A997	9.90	....	....
4	5	A1097	11.25	....	....

Type B



1-Piece Body (½ to 1-Inch)



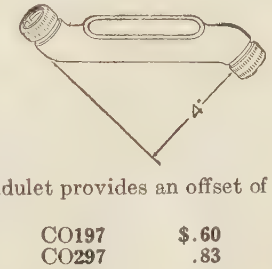
2-Piece Body (1¼ to 4-Inch)

½	100	B197	$.34	B147	$.34
¾	50	B297	.45	B247	.45
1	20	B397	.63	B347	.63
1¼	20	B497	1.48	B447	1.48
1½	10	B597	1.84	B547	1.84
2	5	B697	3.20	B647	3.20
2½	5	B797	5.20	....	....
3	5	B897	6.90	....	....
3½	5	B997	8.75	....	....
4	5	B1097	15.05	....	....

Type C

½	100	C197	$.46	C147	$.46
¾	50	C297	.59	C247	.59
1	20	C397	.85	C347	.85
1¼	20	C497	1.40	C447	1.40
1½	10	C597	1.90	C547	1.90
2	5	C697	3.63	C647	3.63
2½	5	C797	6.80	....	....
3	5	C897	8.80	....	....
3½	5	C997	12.50	....	....
4	5	C1097	15.50	....	....

Type CO



Type CO Condulet provides an offset of 4 inches in a conduit system.

½	50	CO197	$.60	CO147	$.60
¾	50	CO297	.83	CO247	.83
1	20	CO397	1.01	CO347	1.01
1¼	10	CO497	1.71	CO447	1.71
1½	10	CO597	2.28	CO547	2.28
2	5	CO697	4.45	CO647	4.45

Obround Threadless Condulets

Schedule CR

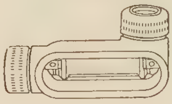
Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

Cadmium-galvanized is the standard finish.

Type E

Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	100	E197	$.34	E147	$.34
¾	50	E297	.44	E247	.44
1	20	E397	.63	E347	.63
1¼	20	E497	1.03	E447	1.03
1½	10	E597	1.38	E547	1.38
2	5	E697	2.74	E647	2.74
2½	5	E797	5.20	.....	....
3	5	E897	6.30	.....	....
3½	5	E997	9.90	.....	.....
4	5	E1097	11.25	.....	....

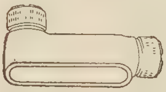
Type L



Double-faced Condulet used either as an LL or LR Condulet. One of two openings furnished with a blank sheet steel cover.

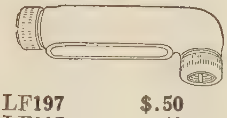
Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	100	L197	$.50	L147	$.50
¾	50	L297	.63	L247	.63
1	20	L397	.91	L347	.91
1¼	20	L497	1.51	L447	1.51
1½	10	L597	2.08	L547	2.08
2	5	L697	3.70	L647	3.70

Type LB



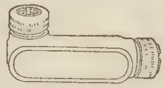
Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	100	LB197	$.50	LB147	$.50
¾	50	LB297	.63	LB247	.63
1	20	LB397	.91	LB347	.91
1¼	20	LB497	1.51	LB447	1.51
1½	10	LB597	2.08	LB547	2.08
2	5	LB697	3.70	LB647	3.70
2½	5	LB797	7.00	......	....
3	5	LB897	9.10	......	....
3½	5	LB997	14.00	......	....
4	5	LB1097	16.50	......	....

Type LF



Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	100	LF197	$.50	LF147	$.50
¾	50	LF297	.63	LF247	.63
1	20	LF397	.91	LF347	.91
1¼	20	LF497	1.51	LF447	1.51
1½	10	LF597	2.08	LF547	2.08
2	5	LF697	3.70	LF647	3.70

Type LL



Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	100	LL197	$.50	LL147	$.50
¾	50	LL297	.63	LL247	.63
1	20	LL397	.91	LL347	.91
1¼	20	LL497	1.51	LL447	1.51
1½	10	LL597	2.08	LL547	2.08
2	5	LL697	3.70	LL647	3.70
2½	5	LL797	7.00	......	....
3	5	LL897	9.10	......	....
3½	5	LL997	14.00	......	....
4	5	LL1097	16.50	....	....

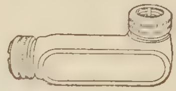
Obround Threadless Condulets

Schedule CR

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

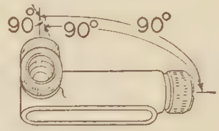
Cadmium-galvanized is the standard finish.

Type LR



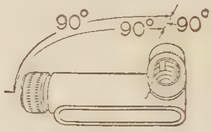
Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	100	LR197	$.50	LR147	$.50
¾	50	LR297	.63	LR247	.63
1	20	LR397	.91	LR347	.91
1¼	20	LR497	1.51	LR447	1.51
1½	10	LR597	2.08	LR547	2.08
2	5	LR697	3.70	LR647	3.70
2½	5	LR797	7.00	......	....
3	5	LR897	9.10	......	....
3½	5	LR997	14.00	......	....
4	5	LR1097	16.50	......	....

Type LBL



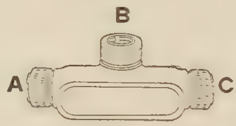
Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	50	LBL197	$.80	LBL147	$.80
¾	25	LBL297	1.07	LBL247	1.07
1	25	LBL397	1.34	LBL347	1.34

Type LBR



Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	50	LBR197	$.80	LBR147	$.80
¾	25	LBR297	1.07	LBR247	1.07
1	25	LBR397	1.34	LBR347	1.34

Type T

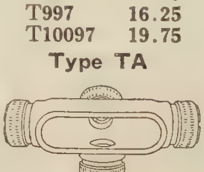


Size of hubs are indicated by sequence of letters.

The size of the cover or wiring device is same as size of the hubs at the ends of the cover opening.

Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½– ½– ½	100	T197	$.63	T11147	$.63
¾– ½– ¾	50	T2197	.84	T21247	.84
¾– ¾– ¾	50	T297	.84	T22247	.84
1 – ½–1	20	T3197	1.19	T31347	1.19
1 – ¾–1	20	T3297	1.19	T32347	1.19
1 –1 –1	20	T397	1.19	T33347	1.19
1¼– ½–1¼	20	T4197	1.91	T41447	1.91
1¼– ¾–1¼	20	T4297	1.91	T42447	1.91
1¼–1 –1¼	20	T4397	1.91	T43447	1.91
1¼–1¼–1¼	20	T497	1.91	T44447	1.91
1½–1½–1½	10	T597	2.71	T55547	2.71
2 –2 –2	5	T697	4.35	T66647	4.35
2½–2½–2½	5	T797	8.00	....	....
3 –3 –3	5	T897	11.40	....	....
3½–3½–3½	5	T997	16.25	....	....
4 –4 –4	5	T10097	19.75	....	....

Type TA



Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	50	TA197	$.90	TA147	$.90
¾	50	TA297	1.11	TA247	1.11
1	20	TA397	1.52	TA347	1.52

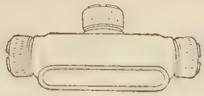
Obround Threadless Condulets

Schedule CR

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

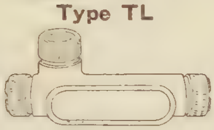
Cadmium-galvanized is the standard finish.

Type TB



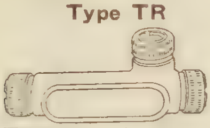
Size In.	Std. Pkg.	For Thick Wall Conduit Cat. No.	Each	For Thin Wall Conduit Cat. No.	Each
½	100	TB197	$ .63	TB147	$ .63
¾	50	TB297	.84	TB247	.84
1	20	TB397	1.19	TB347	1.19
1¼	10	TB497	1.91	TB447	1.91
1½	10	TB597	2.71	TB547	2.71
2	5	TB697	4.35	TB647	4.35
2½	5	TB797	8.00	......	....
3	5	TB897	11.40	......	....
3½	5	TB997	16.25	......	....
4	5	TB10097	19.75	......	....

Type TL



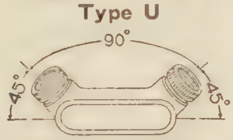
½	100	TL197	$ .63	TL147	$ .63
¾	50	TL297	.84	TL247	.84
1	20	TL397	1.19	TL347	1.19

Type TR



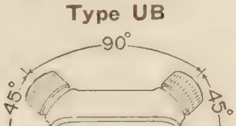
½	100	TR197	$ .63	TR147	$ .63
¾	50	TR297	.84	TR247	.84
1	20	TR397	1.19	TR347	1.19

Type U



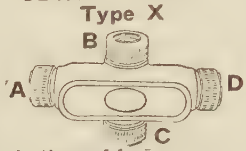
½	100	U197	$ .58	U147	$ .58
¾	50	U297	.72	U247	.72
1	20	U397	1.04	U347	1.04
1¼	20	U497	1.72	U447	1.72
1½	10	U597	2.36	U547	2.36
2	5	U697	4.20	U647	4.20

Type UB



½	100	UB197	$ .58	UB147	$ .58
¾	50	UB297	.72	UB247	.72
1	20	UB397	1.04	UB347	1.04
1¼	20	UB497	1.72	UB447	1.72
1½	10	UB597	2.36	UB547	2.36
2	5	UB697	4.20	UB647	4.20

Type X



Sizes of hubs are indicated by sequence of letters.
Size of cover or wiring device is same size as largest hub.

½– ½– ½– ½	75	X197	$ .80	X111147	$ .80
¾– ¾– ¾– ¾	50	X297	1.13	X222247	1.13
1 – ½– ½–1	20	X3197	1.57	X311347	1.57
1 –1 –1 –1	20	X397	1.57	X333347	1.57
1¼–1¼–1¼–1¼	20	X497	2.32	X444447	2.32
1½–1½–1½–1½	10	X597	3.14	X555547	3.14
2 –2 –2 –2	5	X697	5.90	X666647	5.90

Obround Condulet Covers with Wire Holes

Schedule CR

Form 7

For Condulets of the Obround Series—Form 7

1-Wire Standard

Size In.	Diam. Holes In.	Std. Pkg.	Porcelain Cat. No.	Porcelain Each	Composition Cat. No.	Composition Each
½	7/16	200	171	$.10	1771	$.20
¾	7/16	100	271	.15	2771	.30
1	7/16	50	371	.25	3771	.50
1¼	7/16	25	471	.36	4771	1.00
1½	1⅜	10	571	.48	5771	1.10
2	1¾	5	671	.60	6771	1.20
2½ or 3	2 5/16	5	871	.80	8771	1.60
3½ or 4	3¼	5	971	.90	9771	2.50
4½, 5 or 6	3¼	1	...	...	14771	4.00

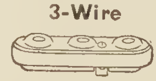
1-Wire Special

½	⅝	200	171S	$.10	.....	....
¾	25/32	100	271S	.15	.....	....
1	1	50	371S	.25	.....	....
1¼	1⅛	25	471S	.36	.....	....

2-Wire

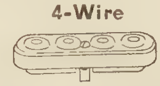
½	⅜	200	172	$.10	1772	$.20
¾	15/32	100	272	.15	2772	.30
1	½	50	372	.25	3772	.50
1¼	11/16	25	472	.36	4772	1.00
1½	13/16	10	572	.48	5772	1.10
2	1	5	672	.60	6772	1.20
2½ or 3	1 7/16	5	872	.80	8772	1.60
3½ or 4	1 15/16	5	972	.90	9772	2.50
4½, 5 or 6	2¼	1	...	...	14772	4.00

3-Wire



½	5/16	200	173	$.10	.....	....
½	⅜	200	...	...	1773	$.20
¾	15/32	100	273	.15	2773	.30
1	½	50	373	.25	3773	.50
1¼	11/16	25	473	.36	4773	1.00
1½	13/16	10	573	.48	5773	1.10
2	1	5	673	.60	6773	1.20
2½ or 3	1 7/16	5	873	.80	8773	1.60
3½ or 4	1 15/16	5	973	.90	9773	2.50
4½, 5 or 6	2¼	1	...	...	14773	4.00

4-Wire



½	5/16	200	174	$.10	1774	$.20
¾	5/16	100	274	.15	2774	.30
1	13/32	50	374	.25	3774	.50
1¼	17/32	25	474	.36	4774	1.00
1½	⅝	10	574	.48	5774	1.10
2	1	5	674	.60	6774	1.20
2½ or 3	1 7/16	5	874	.80	8774	1.60
3½ or 4	1 15/16	5	974	.90	9774	2.50
4½, 5 or 6	1⅞	1	...	...	14774	4.00

5-Wire

¾	5/16	100	275	$.15	2775	$.30
1	13/32	50	375	.25	3775	.50
1¼	17/32	25	475	.36	4775	1.00
1½	⅝	10	575	.48	5775	1.10
2	13/16	5	675	.60	6775	1.20
2½ or 3	1 1/16	5	875	.80	8775	1.60
3½ or 4	1½	5	...	...	9775	2.50
4½, 5 or 6	1 9/16	1	...	...	14775	4.00

Obround Condulet Covers with Wire Holes

Schedule CR

Form 7

For Condulets of the Obround Series—Form 7

6-Wire

Size In.	Diam. Holes In.	Std. Pkg.	Porcelain Cat. No.	Porcelain Each	Composition Cat. No.	Composition Each
3/4	5/16	100	276	$.15	2776	$.30
1	3/8	50	376	.25	3776	.50
1 1/4	1/2	25	476	.36	4776	1.00
1 1/2	17/32	10	576	.48	5776	1.10
2	5/8	5	676	.60	6776	1.20
2 1/2 or 3	7/8	5	876	.80	8776	1.60
3 1/2 or 4	1 3/16	5	...	...	9776	2.50
4 1/2, 5 or 6	1 5/16	1	...	...	14776	4.00

7-Wire

Size In.	Diam. Holes In.	Std. Pkg.	Porcelain Cat. No.	Porcelain Each	Composition Cat. No.	Composition Each
1	11/32	50	377	$.25	3777	$.50
1 1/4	7/16	25	477	.36	4777	1.00
1 1/2	15/32	10	...	...	5777	1.10
2	19/32	5	...	...	6777	1.20
2 1/2 or 3	25/32	5	...	...	8777	1.60
3 1/2 or 4	1	5	...	...	9777	2.50
4 1/2, 5 or 6	1 1/8	1	...	...	14777	4.00

8-Wire

Size In.	Diam. Holes In.	Std. Pkg.	Porcelain Cat. No.	Porcelain Each	Composition Cat. No.	Composition Each
1	5/16	50	378	$.25	3778	$.50
1 1/4	3/8	25	478	.36	4778	1.00
1 1/2	13/32	10	...	...	5778	1.10
2	1/2	5	...	...	6778	1.20
2 1/2 or 3	21/32	5	...	...	8778	1.60
3 1/2 or 4	27/32	5	...	...	9778	2.50
4 1/2, 5 or 6	1	1	...	...	14778	4.00

9-Wire

Size In.	Diam. Holes In.	Std. Pkg.	Porcelain Cat. No.	Porcelain Each	Composition Cat. No.	Composition Each
1	19/64	50	379	$.25	3779	$.50
1 1/4	21/64	25	...	...	4779	1.00
1 1/2	23/64	10	...	...	5779	1.10
2	29/64	5	...	...	6779	1.20
2 1/2 or 3	19/32	5	...	...	8779	1.60
3 1/2 or 4	25/32	5	...	...	9779	2.50
4 1/2, 5 or 6	7/8	1	...	...	14779	4.00

Blank

Size In.	Diam. Holes In.	Std. Pkg.	Porcelain Cat. No.	Porcelain Each	Composition Cat. No.	Composition Each
1/8	....	200	...	...	18770	$.20
1/4	...	200		.	28770	.25
3/8	....	200	...	...	38770	.30
1/2	....	200	...	...	1770	.30
3/4	....	100	...	...	2770	.40
1	....	50	...	...	3770	.60
1 1/4	....	25	...	...	4770	1.10
1 1/2	....	10	...	...	5770	1.20
2	....	5	...	...	6770	1.40
2 1/2 or 3	....	5	...	...	8770	3.25
3 1/2 or 4	....	5	...	...	9770	4.50
4 1/2, 5 or 6	....	1	...	...	14770	5.75

If specified on order, blank composition cover will be furnished with special drilling at an advance in list price as follows:

Up to 1/2 inch diameter, 10 cents list per hole;
Over 1/2 inch but less than 1-inch, 20 cents list per hole;
1 inch and over, 30 cents list per hole.

Obround Condulet Covers

Schedule CR

Form 7

For Condulets of the Obround Series—Form 7

Blank Metal Covers

Sheet Steel

Cast Feraloy

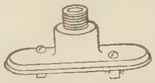
Cadmium-galvanized is the standard finish.

Size Inches	Std. Pkg.	Sheet Steel Cat. No.	Sheet Steel Each	Cast Feraloy Cat. No.	Cast Feraloy Each
1/8	100	1870	$.06	....	....
1/4	100	2870	.06	....	....
3/8	100	3870	.06	....	....
1/2	200	170	.08	170f	$.16
3/4	100	270	.11	270f	.22
1	50	370	.23	370f	.35
1 1/4	25	470	.32	470f	.50
1 1/2	10	570	.45	570f	.70
2	5	670	.56	670f	.90
2 1/2 or 3	5	870*	.75	....	....
3 1/2 or 4	5	970*	.80	....	....

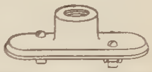
*These covers are made of cast aluminum.

Covers with Nipple

Cast Feraloy



With Male Nipple



With Female Nipple

Cadmium-galvanized is the standard finish.

Size Inches	Std. Pkg.	Male Cat. No.	Male Each	Female Cat. No.	Female Each
With 1/8-Inch Nipple					
1/2	200	1721	$.20	1731	$.20
3/4	100	2721	.25	2731	.25
1	50	3721	.35	3731	.35
With 1/4-Inch Nipple					
1/2	200	1722	$.23	1732	$.23
3/4	100	2722	.28	2732	.28
1	50	3722	.38	3732	.38
With 3/8-Inch Nipple					
1/2	200	1723	$.25	1733	$.25
3/4	100	2723	.30	2733	.30
1	50	3723	.40	3733	.40
With 1/2-Inch Nipple					
1/2	200	1724	$.30	1734	$.30
3/4	100	2724	.35	2734	.35
1	50	3724	.45	3734	.45
1 1/4	25	4724	.60	4734	.60
1 1/2	10	5724	.75	5734	.75

Covers with Cord Clamps

Acts as a safeguard for the upper end of drop cords, and prevents any strain on the soldered connections of the conductors.

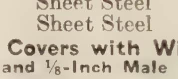
The hole through the cover is provided with a bushing. When the lamp socket is provided with a similar cord clamp, the drop cord is effectually protected against hard usage.

Cadmium-galvanized finish.

Cat. No.	Each	Description	Size Inches	Std. Pkg.
1972	$.30	Sheet Steel	1/2	200
2972	.35	Sheet Steel	3/4	100

Porcelain Covers with Wire Holes

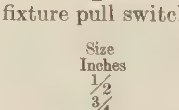
1-Wire and 1/8-Inch Male Nipple



For drop cord and fixture pull switch.

Cat. No.	Each	Size Inches	Diam. Hole Inches	Std. Pkg.
1782	$.35	1/2	13/32	200
2782	.40	3/4	13/32	100

2-Wire



For weatherproof socket.

Cat. No.	Each	Size Inches	Diam. Holes Inches	Std. Pkg.
1781	$.16	1/2	5/16	200
2781	.25	3/4	5/16	100

Condulet Wiring Devices

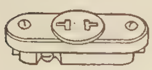
Schedule CR

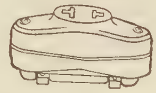
For Condulets of the Obround Series

Attachment Plug Receptacles

2-Pole

Composition | **Porcelain**





Single, with Double T Slots
15 Amperes, 125 Volts; 10 Amperes, 250 Volts

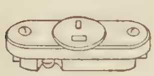
Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
1715	$.40	½	100	1705	$.40	½	100
2715	.45	¾	100	2705	.45	¾	100
3715	.70	1	50	3705	.50	1	50

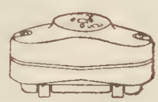
Duplex, with Double T Slots

1725	$.60	½	100	....	....	...	...
2725	.70	¾	50	....	....	...	...
3725	.90	1	50	....	....	...	...

Polarity Plug Receptacles

2-Pole



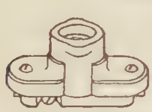


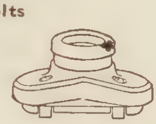
15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
†1728	$.40	½	100	†1708	$.40	½	100
†2728	.45	¾	100	†2708	.45	¾	100
†3728	.70	1	50	†3708	.50	1	50
20 Amperes, 250 Volts							
1738	$.55	½	100	1718	$.55	½	100
2738	.60	¾	100	2718	.60	¾	100
3738	.85	1	50	3718	.65	1	50

Lamp Receptacles

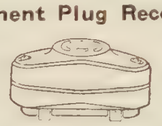
660 Watts, 600 Volts





Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
With Shadeholder Groove							
1726	$.35	½	100	1706	$.30	½	100
2726	.40	¾	100	2706	.35	¾	100
3726	.60	1	50	3706	.40	1	50
Without Shadeholder Groove							
1727	$.35	½	100	1707	$.25	½	100
2727	.40	¾	100	2707	.30	¾	100
3727	.60	1	50	....	....	..	...

Attachment Plug Receptacles



Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
3-Wire, 3-Pole — 15 Amperes, 125 Volts; 10 Amperes, 250 Volts							
....	....	...	..	1709	$.60	½	100
....	....	...	...	2709	.65	¾	100
20 Amperes, 250 Volts							
....	....	...	...	1719	$.75	½	100
....	....	...	...	2719	.80	¾	100
2-Wire, 3-Pole, Extra Pole Grounded — 15 Amperes, 125 Volts; 10 Amperes, 250 Volts							
....	....	...	...	1729	$.85	½	100
....	....	...	...	2729	.90	¾	100
20 Amperes, 250 Volts							
....	....	...	...	1739	$.90	½	100
....	....	...	..	2739	.95	¾	100

†Take Hubbell No. 5567 Polarized plug. For use with parallel blade polarity plugs, use Catalogue Nos. 1705, 1715, 1725, 2705, 2715, 2725, 3705, 3715, annd 3725 receptacles.

Prices for receptacles listed above do not include attachment plugs.

If specified on the order, lamp receptacle with lamp grip will be furnished at an advance of 10 cents in the list price.

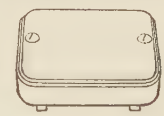
Type OCB Obround Branch Extensions

Schedule CR

Form 7

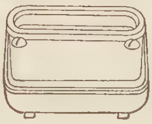
For bridging from one Obround Condulet to another. Cadmium-galvanized is the standard finish.

With Blank Cover



Cat. No.	Each	For Connecting Condulets Size, Inches	Take Covers Inches	Std. Pkg.
OCB1	$.65	½ to ½	...	50
OCB6	.90	¾ to ½	...	50
OCB2	1.00	¾ to ¾	...	50
OCB8	1.25	1 to ½	...	25
OCB9	1.35	1 to ¾	...	25
OCB3	1.45	1 to 1	...	25
OCB4	1.70	1¼ to 1¼	...	25

With Cover with Obround Opening



Cat. No.	Each	For Connecting Condulets Size, Inches	Take Covers Inches	Std. Pkg.
OCB10	$.70	½ to ½	½	50
OCB16	.95	¾ to ½	¾	50
OCB12	1.05	¾ to ¾	¾	50
OCB18	1.35	1 to ½	1	25
OCB19	1.45	1 to ¾	1	25
OCB13	1.55	1 to 1	1	25
OCB14	1.90	1¼ to 1¼	1¼	25

Covers for Obround Condulets

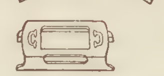
Schedule CR

Cadmium-galvanized is the standard finish.

Takes P & S-Despard wiring devices, which include single-pole, double-pole, 3-way and 4-way switches; convenience and radio outlets; and pilot or night lights.

Mounting bridge is required to install the P & S-Despard wiring devices and is furnished with each 1755 cover listed below.

Complete with Mounting Bridge Aluminum Alloy



Cat. No.	Each	Size, In.
1755	$.20	½

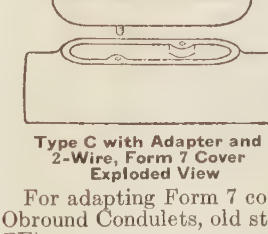
Mounting Bridge Only

Cat. No.	Each	Size, In.
717	$.05	..

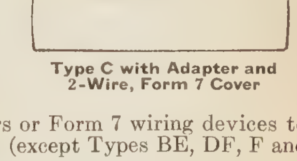
Type OHN Obround Adapters

Schedule CR

Form 7



Type C with Adapter and 2-Wire, Form 7 Cover Exploded View



Type C with Adapter and 2-Wire, Form 7 Cover

For adapting Form 7 covers or Form 7 wiring devices to Obround Condulets, old style (except Types BE, DF, F and FE).

Cat. No.	Each	Size Inches	Std. Pkg.
OHN1	$.15	½	100
OHN2	.20	¾	50
OHN3	.25	1	20
OHN4	.35	1¼	20
OHN5	.50	1½	10

Mogul Series Condulets

Schedule CR

Take Mogul Covers

Cadmium-galvanized is the standard finish.

Type BC

Cat. No.	Each	Size In.	Std. Pkg.
BC3	$1.90	1	25
BC4	2.15	1¼	10
BC5	4.15	1½	10
BC6	5.00	2	5
BC7	7.40	2½	5
BC8	9.90	3	5
BC9	14.85	3½	5
BC10	18.00	4	5

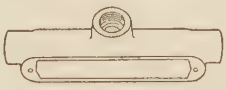
Type BEE

Cat. No.	Each	Size In.	Std. Pkg.
BEE3	$1.70	1	25
BEE4	1.90	1¼	10
BEE5	3.70	1½	10
BEE6	4.50	2	5
BEE7	6.80	2½	5
BEE8	8.70	3	5
BEE9	14.00	3½	5
BEE10	16.00	4	5

Type BLB

BLB3	$1.90	1	25
BLB4	2.15	1¼	10
BLB5	4.15	1½	10
BLB6	5.00	2	5
BLB7	7.60	2½	5
BLB8	10.20	3	5
BLB9	16.35	3½	5
BLB10	19.00	4	5

Type BT



BT3	$2.25	1	25
BT4	2.50	1¼	10
BT5	4.65	1½	10
BT6	5.60	2	5
BT7	7.80	2½	5
BT8	11.20	3	5
BT9	16.85	3½	5
BT10	20.00	4	5

Type BTB

BTB3	$2.25	1	25
BTB4	2.50	1¼	10
BTB5	4.65	1½	10
BTB6	5.60	2	5
BTB7	7.80	2½	5
BTB8	11.20	3	5
BTB9	16.85	3½	5
BTB10	20.00	4	5

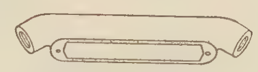
Type BU

BU3	$1.90	1	25
BU4	2.15	1¼	10
BU5	4.15	1½	10
BU6	5.00	2	5
BU7	7.60	2½	5
BU8	10.20	3	5
BU9	16.35	3½	5
BU10	19.00	4	5

Type BUB

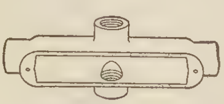
BUB3	$1.90	1	25
BUB4	2.15	1¼	10
BUB5	4.15	1½	10
BUB6	5.00	2	5
BUB7	7.60	2½	5
BUB8	10.20	3	5
BUB9	16.35	3½	5
BUB10	19.00	4	5

Type BUF



BUF3	$1.90	1	25
BUF4	2.15	1¼	10
BUF5	4.15	1½	10
BUF6	5.00	2	5
BUF7	7.60	2½	5
BUF8	10.20	3	5
BUF9	16.35	3½	5
BUF10	19.00	4	5

Type BX



BX3	$2.50	1	25
BX4	2.75	1¼	10
BX5	5.15	1½	10
BX6	6.25	2	5
BX7	$8.50	2½	5
BX8	12.50	3	5
BX9	21.00	3½	5
BX10	26.00	4	5

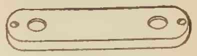
Mogul Covers

Schedule CR

For Condulets of the Mogul Series

Bakelite

1-Wire



2-Wire

Size Inches	Std. Pkg.	1-Wire Cat. No.	Each	Diam. Holes In.	2-Wire Cat. No.	Each	Diam. Holes In.
1 or 1¼	10	CF241	$1.90	1 5/16	CF242	$1.90	11/16
1½ or 2	5	CF261	3.50	2	CF262	3.50	1 1/16
2½ or 3	5	CF281	5.50	2 5/16	CF282	5.50	1½
3½ or 4	5	CF291	8.25	2 5/16	CF292	8.25	2

3-Wire

4-Wire

Size Inches	Std. Pkg.	3-Wire Cat. No.	Each	Diam. Holes In.	4-Wire Cat. No.	Each	Diam. Holes In.
1 or 1¼	10	CF243	$1.90	21/32	CF244	$1.90	19/32
1½ or 2	5	CF263	3.50	1	CF264	3.50	⅞
2½ or 3	5	CF283	5.50	1⅜	CF284	5.50	1¼
3½ or 4	5	CF293	8.25	1 13/16	CF294	8.25	1⅝

5-Wire

6-Wire

Size Inches	Std. Pkg.	5-Wire Cat. No.	Each	Diam. Holes In.	6-Wire Cat. No.	Each	Diam. Holes In.
1 or 1¼	10	CF245	$1.90	17/32	CF246	$1.90	½
1½ or 2	5	CF265	3.50	¾	CF266	3.50	11/16
2½ or 3	5	CF285	5.50	1⅛	CF286	5.50	1
3½ or 4	5	CF295	8.25	1 7/16	CF296	8.25	1⅜

7-Wire

8-Wire

Size Inches	Std. Pkg.	7-Wire Cat. No.	Each	Diam. Holes In.	8-Wire Cat. No.	Each	Diam. Holes In.
1 or 1¼	10	CF247	$1.90	½	CF248	$1.90	7/16
1½ or 2	5	CF267	3.50	11/16	CF268	3.50	⅝
2½ or 3	5	CF287	5.50	1	CF288	5.50	⅞
3½ or 4	5	CF297	8.25	1⅜	CF298	8.25	1 3/16

9-Wire

Blank

Size Inches	Std. Pkg.	9-Wire Cat. No.	Each	Diam. Holes In.	Blank Cat. No.	Each	Diam. Holes In.
1 or 1¼	10	CF249	$1.90	⅜	CF534	$1.25	...
1½ or 2	5	CF269	3.50	9/16	CF536	3.00	...
2½ or 3	5	CF289	5.50	13/16	CF538	4.50	...
3½ or 4	5	CF299	8.25	1 1/16	CF539	7.30	...

Cast Feraloy Covers—Blank

Size Inches	Std. Pkg.	Without Gasket Cat. No.	Each	With Gasket Cat. No.	Each
1 or 1¼	10	BG47	$1.10	BG48	$1.50
1½ or 2	5	BG67	1.75	BG68	2.40
2½ or 3	5	BG87	4.00	BG88	5.40
3½ or 4	5	BG97	6.00	BG98	7.50

Cadmium-galvanized is the standard finish for the cast feraloy covers.

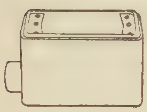
FD Series Deep Type Condulets

Schedule CR

Take covers and deep or shallow flush rectangular wiring devices, or plug receptacle housings.

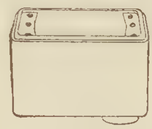
Cadmium-galvanized is the standard finish.

Type FD



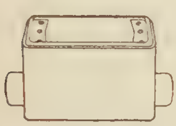
Cat. No.	Each	Size In.	Std. Pkg.
FD1	$.75	½	50
FD2	.85	¾	50
FD3	1.00	1	25

Type FDA



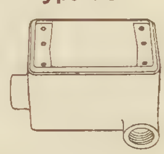
Cat. No.	Each	Size In.	Std. Pkg.
FDA1	$.75	½	50
FDA2	.85	¾	50
FDA3	1.00	1	25

Type FDC



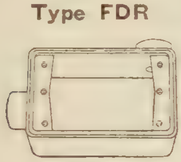
Cat. No.	Each	Size In.	Std. Pkg.
FDC1	$.85	½	50
FDC2	1.05	¾	50
FDC3	1.25	1	25

Type FDL



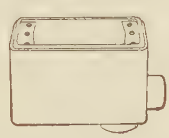
Cat. No.	Each	Size In.	Std. Pkg.
FDL1	$.85	½	50
FDL2	1.05	¾	50
FDL3	1.25	1	25

Type FDR



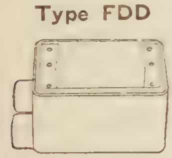
Cat. No.	Each	Size In.	Std. Pkg.
FDR1	$.85	½	50
FDR2	1.05	¾	50
FDR3	1.25	1	25

Type FDLA



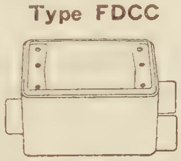
Cat. No.	Each	Size In.	Std. Pkg.
FDLA1	$.85	½	50
FDLA2	1.05	¾	50
FDLA3	1.25	1	25

Type FDD



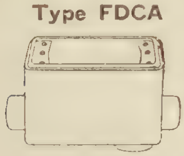
Cat. No.	Each	Size In.	Std. Pkg.
FDD1	$.85	½	50
FDD2	1.05	¾	50
FDD3	1.25	1	25

Type FDCC



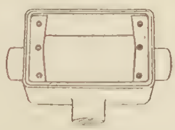
Cat. No.	Each	Size In.	Std. Pkg.
FDCC1	$1.10	½	50
†FDCC21	1.35	¾	50
†FDCÇ31	1.55	1	25

Type FDCA



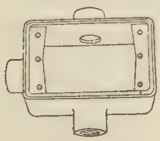
Cat. No.	Each	Size In.	Std. Pkg.
FDCA1	$1.10	½	50
FDCA2	1.35	¾	50
FDCA3	1.55	1	25

Type FDCT



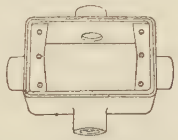
Cat. No.	Each	Size In.	Std. Pkg.
FDCT1	$1.10	½	50
FDCT2	1.35	¾	50
FDCT3	1.55	1	25

Type FDT



Cat. No.	Each	Size In.	Std. Pkg.
FDT1	$1.10	½	50
FDT2	1.35	¾	50
FDT3	1.55	1	25

Type FDX



Cat. No.	Each	Size In.	Std. Pkg.
FDX1	$1.30	½	50
FDX2	1.60	¾	50
FDX3	1.80	1	25

†The hubs at the right in the illustration are ½ inch.

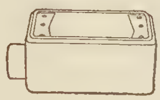
FS Series Shallow Type Condulets

Schedule CR

Take covers and shallow flush rectangular wiring devices or plug receptacle housings.

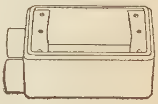
Cadmium-galvanized is the standard finish.

Type FS



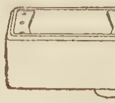
Cat. No.	Each	Size In.	Std. Pkg.
FS1	$.65	½	50
FS2	.75	¾	50
FS3	.85	1	25

Type FSS



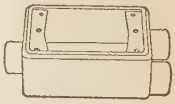
Cat. No.	Each	Size In.	Std. Pkg.
FSS1	$.75	½	50
FSS2	.90	¾	50
FSS3	1.10	1	25

Type FSA



Cat. No.	Each	Size In.	Std. Pkg.
FSA1	$.65	½	50
FSA2	.75	¾	50
FSA3	.85	1	25

Type FSCC

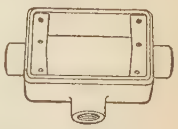


Cat. No.	Each	Size In.	Std. Pkg.
FSCC1	$1.00	½	50
FSCC21†	1.25	¾	50
FSCC31†	1.45	1	25

Type FSC

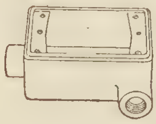
Cat. No.	Each	Size In.	Std. Pkg.
FSC1	$.75	½	50
FSC2	.90	¾	50
FSC3	1.10	1	25

Type FSCT



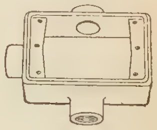
Cat. No.	Each	Size In.	Std. Pkg.
FSCT1	$1.00	½	50
FSCT2	1.25	¾	50
FSCT3	1.45	1	25

Type FSL



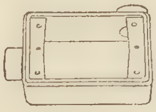
Cat. No.	Each	Size In.	Std. Pkg.
FSL1	$.75	½	50
FSL2	.90	¾	50
FSL3	1.10	1	25

Type FST



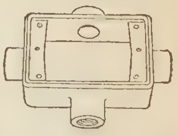
Cat. No.	Each	Size In.	Std. Pkg.
FST1	$1.00	½	50
FST2	1.25	¾	50
FST3	1.45	1	25

Type FSR



Cat. No.	Each	Size In.	Std. Pkg.
FSR1	$.75	½	50
FSR2	.90	¾	50
FSR3	1.10	1	25

Type FSX



Cat. No.	Each	Size In.	Std. Pkg.
FSX1	$1.20	½	50
FSX2	1.50	¾	50
FSX3	1.70	1	25

†The hubs at the right in the illustration are ½ inch.

2-Gang Tandem

Takes covers and shallow flush rectangular wiring devices, or plug receptacle housings (same as the FS Series).

Cadmium-galvanized is the standard finish.

Type FS

Cat. No.	Each	Size In.	Std. Pkg.
FS17	$1.65	½	25
FS27	1.75	¾	25
FS37	1.85	1	10

Type FSC

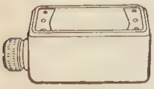
Cat. No.	Each	Size In.	Std. Pkg.
FSC17	$1.75	½	25
FSC27	1.85	¾	25
FSC37	1.95	1	10

FS Series Threadless Condulets

Schedule CR

Threadless and threaded condulets take covers and shallow flush rectangular wiring devices, or plug receptacle housing. Cadmium-galvanized is the standard finish.

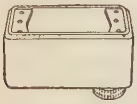
Type FS



Thick Wall

Cat. No.	Each	Size In.	Std. Pkg.
FS191	$.70	½	50
FS291	.85	¾	50
Thin Wall			
FS141	$.70	½	50
FS241	.85	¾	50

Type FSA

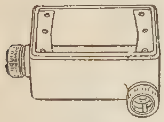


Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSA191	$.70	½	50
Thin Wall			
FSA141	$.70	½	50

Type FSC

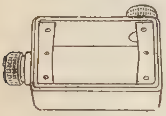
Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSC191	$.85	½	50
FSC291	1.10	¾	50
FSC391	1.40	1	25
Thin Wall			
FSC141	$.85	½	50
FSC241	1.10	¾	50
FSC341	1.40	1	25

Type FSL



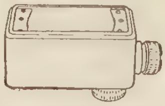
Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSL191	$.85	½	50
FSL291	1.10	¾	50
Thin Wall			
FSL141	$.85	½	50
FSL241	1.10	¾	50

Type FSR



Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSR191	$.85	½	50
FSR291	1.10	¾	50
Thin Wall			
FSR141	$.85	½	50
FSR241	1.10	¾	50

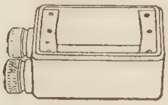
Type FSLA



Thick Wall

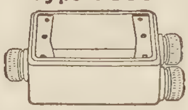
Cat. No.	Each	Size In.	Std. Pkg.
FSLA191	$.85	½	50
Thin Wall			
FSLA141	$.85	½	50

Type FSS



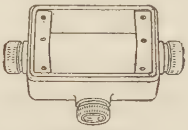
Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSS191	$.85	½	50
Thin Wall			
FSS141	$.85	½	50

Type FSCC



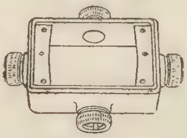
Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSCC191	$1.15	½	50
FSCC2191	1.45	¾-½-½	50
Thin Wall			
FSCC141	$1.15	½	50
FSCC2141	1.45	¾-½-½	50

Type FSCT



Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSCT191	$1.15	½	50
FSCT291	1.55	¾	50
FSCT391	1.90	1	25
Thin Wall			
FSCT141	$1.15	½	50
FSCT241	1.55	¾	50
FSCT341	1.90	1	25

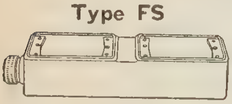
Type FSX



Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSX191	$1.40	½	50
FSX291	1.90	¾	50
FSX391	2.30	1	25
Thin Wall			
FSX141	$1.40	½	50
FSX241	1.90	¾	50
FSX341	2.30	1	25

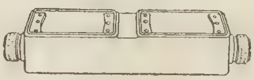
2-Gang Tandem

Type FS



Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FS197	$1.70	½	25
FS297	1.85	¾	25
Thin Wall			
FS147	$1.70	½	25
FS247	1.85	¾	25

Type FSC



Cat. No.	Each	Size In.	Std. Pkg.
Thick Wall			
FSC197	$1.85	½	25
FSC297	2.05	¾	25
Thin Wall			
FSC147	$1.85	½	25
FSC247	2.05	¾	25

Condulet Covers

Schedule CR

For Condulets of the FS and FD Series; FS Series 2-Gang Tandem

Cadmium-galvanized is the standard finish.

Standard package quantity for all covers listed below is 50.

For Single Push Button Switches

Sheet Steel

Cat. No.	Each	Style
DS7	$.15	Surface
DSS7	.15	Flush

For Rotary Flush Switches

Sheet Steel

Cat. No.	Each	Style
DS9	$.15	Surface
DSS9	.15	Flush

For Hart & Hegeman Tumbler Flush Switches with Round Handles

Sheet Steel

DS27	$.15	Surface
DSS27	.15	Flush

For Hubbell and Arrow E Toggle Flush Switches

Sheet Steel

DS29	$.15	Surface
DSS29	.15	Flush

For Double Push Button, Double Push Button Momentary Contact, and Double Push Lock Switches

Sheet Steel

DS8	$.15	Surface
DSS8	.15	Flush

Cast Feraloy—Guarded

DS8g	$.35	Surface
DS8g	.35	Flush

For G-E, Arrow E, Bryant, Hart & Hegeman, and Hubbell Tumbler Flush Switches with Square Handles

Sheet Steel

DS32	$.15	Surface
DSS32	.15	Flush

Cast Feraloy—Guarded

DS32g	$.35	Surface
DS32g	.35	Flush

For Round Flush Receptacles

Sheet Steel

Diameter opening, 1 13/32 inches.

DS21	$.25	Surface
DSS21	.25	Flush

Sheet Steel—Pivoted Lid

Diameter opening, 1⅝ inches.

DS28	$.40	Surface
DSS28	.40	Flush

Sheet Steel—Spring Hinge Lid

Diameter opening, 1⅝ inches.

DS10	$.60	Surface
DSS10	.60	Flush

Cast Feraloy—with Spring Door

Diameter opening, 1 13/32 inches.

DS10g	$1.25	Surface
DS10g	1.25	Flush

Condulet Covers

Schedule CR

For Condulets of the FS and FD Series; FS Series 2-Gang Tandem

Cadmium-galvanized is the standard finish.
Standard package quantity for covers listed below is 50.

For Standard Duplex Flush Receptacles

Sheet Steel

Cat. No.	Each	Style
DS23	$.30	Surface
DSS23	.30	Flush

For G-E 30-Amp. Flush Plug Receptacles

Sheet Steel

Opening, 1⅝ inches.

Cat. No.	Each	Style
DS35	$.25	Surface
DSS35	.25	Flush

For Pilot Lamp Flush Receptacles

Sheet Steel

Furnished with clear or colored jewels

Style	Surface Cat. No.	Surface Each	Flush Cat. No.	Flush Each
Ruby	DS24	$1.00	DSS24	$1.00
Olive green	DS34	1.00	DSS34	1.00
Emerald	DS41	1.00	DSS41	1.00
Canary	DS42	1.00	DSS42	1.00
Amethyst	DS43	1.00	DSS43	1.00
Amber	DS44	1.00	DSS44	1.00
Topaz	DS45	1.00	DSS45	1.00
Opal	DS46	1.00	DSS46	1.00
Frosted	DS47	1.00	DSS47	1.00
Clear	DS48	1.00	DSS48	1.00
Blue	DS49	1.00	DSS49	1.00

Blank Covers

Sheet Steel

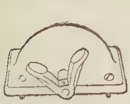
Cat. No.	Each	Style
DS100	$.10	Surface
DSS100	.10	Flush

Cast Feraloy; with Gasket

Cat. No.	Each	Style
DS100g	$.25	Surface
DS100g	.25	Flush

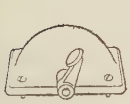
Vaporproof Covers with Switch Operating Mechanism

For Condulets of the FS and FD series and FS series, two-gang tandem.
Surface or flush. Furnished with gasket.



For External Operation of Double Push Button Switches

Cat. No.	With Handle Each	Material	Std. Pkg.
DS108	$1.75	Cast Feraloy	25
DS1008	2.50	Cast Brass	25



For Momentary Contact Switches

Cat. No.	With Handle Each	Material	Std. Pkg.
DS107	$1.75	Cast Feraloy	25
DS1007	2.50	Cast Brass	25

For External Operation of Square Handle Tumbler Switches

For Standard Operation On or Off

Cat. No.	Each	Material	Std. Pkg.
DS128	$1.75	Cast Feraloy	25
DS1028	2.50	Cast Brass	25

For Momentary Contact Operation A, Normally On—B, Normally Off

Cat. No. A	Cat. No. B	Each	Material	Std. Pkg.
DS126	DS127	$1.75	Cast Feraloy	25
DS1026	DS1027	2.50	Cast Brass	25

Type BRD Plug Receptacle Housings

Schedule CR

For Condulets of the FS and FD Series; FS Series 2-Gang Tandem

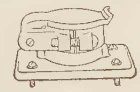
***30 Amperes, 250 Volts A.C.**

Type BRD Housings can be used on Condulets mounted either on the surface of or flush with the wall.

They take Type BP plugs; 2-pole housings are furnished with 30-ampere, 250-volt receptacle BR302; 3-pole housings with 30-ampere, 250-volt receptacle BR303.

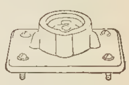
Cadmium-galvanized is the standard finish.

With Spring Door



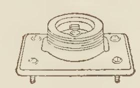
Cat. No.	Each	Std. Pkg.
2-Pole		
BRD6302	$4.20	.10
3-Pole		
BRD6303	$4.90	10

Plain



Cat. No.	Each	Std. Pkg.
2-Pole		
BRD302	$2.60	10
3-Pole		
BRD303	$3.10	10

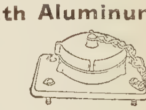
Threaded



Furnished with gasket.

Cat. No.	Each	Std. Pkg.
2-Pole		
BRD7302	$2.80	10
3-Pole		
BRD7303	$3.35	10

With Aluminum Cap



Furnished with gasket.

Cat. No.	Each	Std. Pkg.
2-Pole		
BRD8302	$3.75	10
3-Pole		
BRD8303	$4.70	10

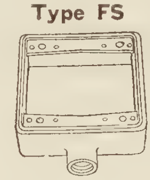
*Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

FS Series 2-Gang Shallow Type Condulets

Schedule CR

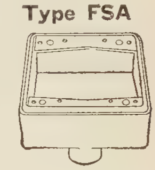
Take covers and flush rectangular wiring devices.
Cadmium-galvanized is the standard finish.

Type FS



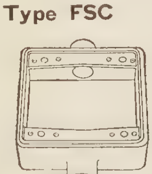
Cat. No.	Each	Size In.	Std. Pkg.
FS12	$1.20	½	25
FS22	1.30	¾	25
FS32	1.40	1	10

Type FSA



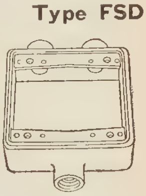
Cat. No.	Each	Size In.	Std. Pkg.
FSA12	$1.20	½	25
FSA22	1.30	¾	25
FSA32	1.40	1	10

Type FSC



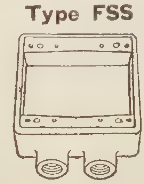
Cat. No.	Each	Size In.	Std. Pkg.
FSC12	$1.30	½	25
FSC222	1.40	¾	25
FSC32	1.55	1	10

Type FSD



Cat. No.	Each	Size In.	Std. Pkg.
FSD12	$1.45	½	25
FSD212	1.55	†¾	25
FSD312	1.65	†1	10

Type FSS



Cat. No.	Each	Size In.	Std. Pkg.
FSS222	$1.40	¾	25

†The hubs at the top in illustration are ½ inch.

If specified, FS Series 2-gang Condulets will be drilled and tapped without extra charge for mounting Types FSTB or YA connection blocks.

FS Series 2-Gang Threadless Condulets

Schedule CR

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

Take covers and flush rectangular wiring devices. Cadmium-galvanized is the standard finish.

The FS Series Condulets with their variety of covers permit flush rectangular wiring devices to be mounted either on the surface of or flush with the wall. There is ample room around the wiring device for the passage of extra wires.

Two styles of sheet steel covers for these condulets are available: for surface mounting and for flush mounting. Those for flush mounting are extended to cover the rough plaster line. Cast feraloy covers for these condulets are suitable for either surface or flush mounting.

Type FS

Size In.	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
½	25	FS192	$1.25	FS142	$1.25
¾	25	FS292	1.40	FS242	1.40

Type FSC

½	25	FSC192	$1.40	FSC142	$1.40
¾	25	FSC292	1.60	FSC242	1.60

Type FSD

½	25	FSD192	$1.60	FSD142	$1.60
¾–½–½†	25	FSD2192	1.75	FSD2142	1.75

†The hubs at the top in the illustration are ½ inch.

2-Gang Condulet Covers for Condulets of the FS Series

For Round Flush Receptacles

Sheet Steel

Cat. No.	Each	Style	Std. Pkg.
S212	$.50	Surface	25
SS212	.50	Flush	25

Sheet Steel with Spring Hinge Lids

S102	$1.20	Surface	25
SS102	1.20	Flush	25

For Double Push Button Switches and Standard Duplex Flush Receptacles, Sheet Steel

S8232	$.50	Surface	25
SS8232	.50	Flush	25

For Standard Duplex Flush Receptacles, Sheet Steel

S232	$.60	Surface	25
SS232	.60	Flush	25

2-Gang Condulet Covers

Schedule CR

For Condulets of the FS Series, 2-Gang

Cadmium-galvanized is the standard finish.
Standard package quantity on all covers is 25.

For Double Push Button, Double Push Button Momentary Contact, and Double Push Lock Switches

Sheet Steel

Cast Feraloy—Guarded

Cat. No.	Each	Style	Cat. No.	Each	Style
S82	$.30	Surface	S82g	$.65	Surface
SS82	.30	Flush	S82g	.65	Flush

For G-E, Arrow E, Bryant, Hart & Hegeman, and Hubbell Square Handle Tumbler Flush Switches

Sheet Steel

Cast Feraloy—Guarded

S322	$.30	Surface	S322g	$.65	Surface
SS322	.30	Flush	S322g	.65	Flush

For G-E, Arrow E, Bryant, H & H, and Hubbell Tumbler Flush Switches with Square Handles and for Pilot Lamp Flush Receptacles

Sheet Steel, with Ruby Jewel

Cat No.	Each	Style
S32242	$1.25	Surface
SS32242	1.25	Flush

For Double Push Button, Double Push Button Momentary Contact, and Double Push Lock Switches and H & H No. 8996 Combination Receptacle and Toggle Switch

Sheet Steel

Cat. No.	Each	Style
S8392	$.30	Surface
SS8392	.30	Flush

Blank Metal Covers

Sheet Steel

Cast Feraloy, with Gasket

Cat. No.	Each	Style	Cat. No.	Each	Style
S1002	$.20	Surface	S1002g	$.50	Surface
SS1002	.20	Flush	S1002g	.50	Flush

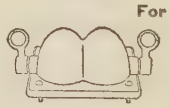
Vaporproof Covers with Switch Operating Mechanism

Surface or flush. Furnished with gasket.

For External Operation of Double Push Button Switches

Cat. No.	With Handle Each	Material
DS1082	$3.00	Cast Feraloy
DS10082	5.75	Cast Brass

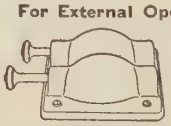
For Momentary Contact Switches



Cat. No.	With Handle Each	Material
DS1072	$3.00	Cast Feraloy
DS10072	5.75	Cast Brass

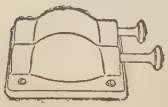
For External Operation of Square Handle Tumbler Switches

For Standard Operation, On or Off



DS1282	$3.00	Cast Feraloy
DS10282	5.75	Cast Brass

For Momentary Contact Operation A, Normally On—B, Normally Off



Cat. No. A	Cat. No. B	Each	Material
DS1262	DS1272	$3.00	Cast Feraloy
DS10262	DS10272	5.75	Cast Brass

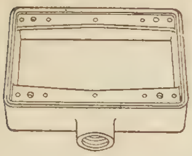
FS Series 3-Gang Shallow Type Condulets

Schedule CR

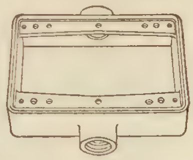
Take covers and flush rectangular wiring devices.

Cadmium-galvanized is the standard finish.

Type FS



Type FSC



Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
FS23	$1.80	¾	25	FSC23	$1.90	¾	25
FS33	1.95	1	10	FSC333	2.05	1	10
.....	....	...	..	FSC43	2.20	1¼	10

FS Series 3-Gang Threadless Condulets

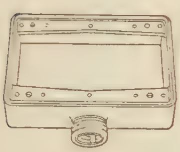
Schedule CR

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

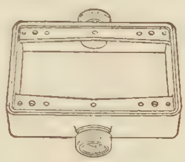
Take covers and flush rectangular wiring devices.

Cadmium-galvanized is the standard finish.

Type FS



Type FSC



			Thick Wall		Thin Wall	
Type	Size In.	Std. Pkg.	Cat. No.	Each	Cat. No.	Each
FS	¾	25	FS293	$1.90	FS243	$1.90
FSC	¾	25	FSC293	2.10	FSC243	2.10

3-Gang Condulet Covers

For Condulets of the FS Series, 3-Gang

Cadmium-galvanized is the standard finish.

Standard package quantity on all covers is 25.

For Double Push Button, Double Push Button Momentary Contact, and Double Push Lock Switches

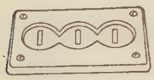
Sheet Steel

Cast Feraloy—Guarded

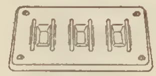
Cat. No.	Each	Style	Cat. No.	Each	Style
S83	$.45	Surface	S83g	$1.00	Surface
SS83	.45	Flush	S83g	1.00	Flush

For G-E, Arrow E, Bryant, H & H, and Hubbell Tumbler Flush Switches with Square Handles

Sheet Steel



Cast Feraloy—Guarded

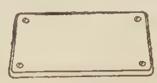


S323	$.45	Surface	S323g	$1.00	Surface
SS323	.45	Flush	S323g	1.00	Flush

Blank Metal Covers

Sheet Steel

Cast Feraloy, with Gasket



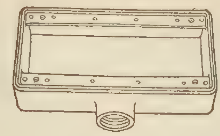
S1003	$.40	Surface	S1003g	$.75	Surface
SS1003	.40	Flush	S1003g	.75	Flush

FS Series 4-Gang Shallow Type Condulets

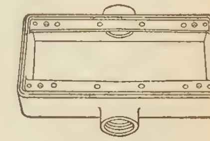
Schedule CR

Take covers and flush rectangular wiring devices.
Cadmium-galvanized is the standard finish.

Type FS



Type FSC



Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
FS24	$2.20	¾	10	FSC24	$2.35	¾	10
FS34	2.40	1	10	FSC34	2.50	1	10

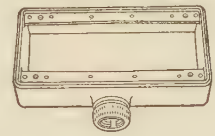
FS Series 4-Gang Threadless Condulets

Schedule CR

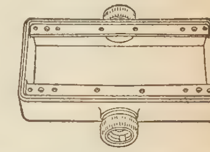
Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

Take covers and flush rectangular wiring devices.
Cadmium-galvanized is the standard finish.

Type FS



Type FSC



			Thick Wall		Thin Wall	
Type	Size In.	Std. Pkg.	Cat. No.	Each	Cat. No.	Each
FS	¾	10	FS294	$2.30	FS244	$2.30
FSC	¾	10	FSC294	2.55	FSC244	2.55

4-Gang Condulet Covers

For Condulets of the FS Series, 4-Gang

Cadmium-galvanized is the standard finish.
Standard package quantity on all covers is 10.

For Double Push Button, Double Push Button Momentary Contact, and Double Push Lock Switches

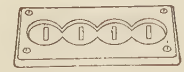
Sheet Steel

Cast Feraloy—Guarded

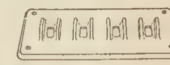
Cat. No.	Each	Style	Cat. No.	Each	Style
S84	$.60	Surface	S84g	$1.40	Surface
SS84	.60	Flush	S84g	1.40	Flush

For G-E, Arrow E, Bryant, H & H, and Hubbell Tumbler Flush Switches with Square Handles

Sheet Steel



Cast Feraloy—Guarded



S324	$.60	Surface	S324g	$1.40	Surface
SS324	.60	Flush	S324g	1.40	Flush

Blank Metal Covers

Sheet Steel

Cast Feraloy—Guarded

S1004	$.60	Surface	S1004g	$1.00	Surface
SS1004	.60	Flush	S1004g	1.00	Flush

G-H Series Condulets

Schedule CR

With Adjustable Bar

Condulets of the G-H Series with adjustable bar are compact, shallow, and the same diameter as the base of the largest device for which each form is designed.

The hubs are cast solid with the body and have an integral bushing and tapered thread.

The adjustable bar is removable and should be attached to and centered on the wiring device. The wiring device is then centered on the body. The adjustable bar clamps it to the flange and securely holds it in position.

A gasket can be used between the cover or wiring device and the Condulet. Gaskets are not regularly furnished with these Condulets and, if desired, must be specifically ordered.

The fastening screws are furnished with and so retained in the covers that they cannot fall out.

These Condulets take covers or round base wiring devices.

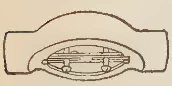
Cadmium-galvanized is the standard finish.

Limiting Dimensions of Round Base Wiring Devices for Use with Condulets of the G-H Series with Adjustable Bar

	Form 5	Form 10	Form 20
Diameter of Base...in..	2 to 2⅝	2⅜ to 3	3 to 3$\frac{11}{16}$
Fastening Screw Spacing Center to Center..in..	⅝ to 1$\frac{9}{16}$	⅝ to 1⅞	⅝ to 2$\frac{7}{16}$

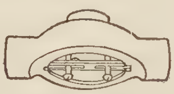
Forms 5, 10, and 20 indicate sizes of Condulets which take covers and wiring devices correspondingly classified.

Type G



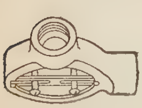
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
G151	$.55	½	100
G252	.65	¾	50
G353	.90	1	25
Form 10			
G1101	$.65	½	50
G2102	.80	¾	25
G3103	1.00	1	25
Form 20			
G1201	$.90	½	50
G2202	.95	¾	25
G3203	1.20	1	25

Type GA



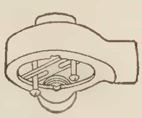
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GA151	$.75	½	100
GA252	.85	¾	50
GA353	1.10	1	25
Form 10			
GA1101	$.85	½	50
GA2102	1.00	¾	25
GA3103	1.20	1	25
Form 20			
GA1201	$1.10	½	50
GA2202	1.20	¾	25
GA3203	1.50	1	25

Type GL



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GL151	$.60	½	100
GL252	.70	¾	50
GL353	.95	1	25
Form 10			
GL1101	$.70	½	50
GL2102	.85	¾	25
GL3103	1.05	1	25
Form 20			
GL1201	$.95	½	50
GL2202	1.05	¾	25
GL3203	1.35	1	25

Type GLA



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GLA151	$.75	½	100
GLA252	.85	¾	50
GLA353	1.10	1	25
Form 10			
GLA1101	$.85	½	50
GLA2102	1.00	¾	25
GLA3103	1.20	1	25
Form 20			
GLA1201	$1.10	½	50
GLA2202	1.20	¾	25
GLA3203	1.50	1	25

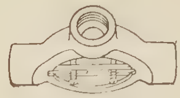
G-H Series Condulets

Schedule CR

With Adjustable Bar

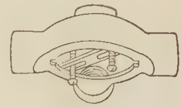
Take covers or round base wiring devices.
Cadmium-galvanized is the standard finish.

Type GT



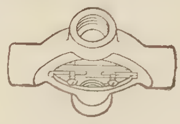
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GT151	$.75	½	100
GT252	.85	¾	50
GT353	1.10	1	25
Form 10			
GT1101	$.85	½	50
GT2102	1.00	¾	25
GT3103	1.20	1	25
Form 20			
GT1201	$1.10	½	50
GT2202	1.20	¾	25
GT3203	1.50	1	25

Type GTA



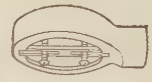
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GTA151	$.90	½	100
GTA252	1.00	¾	50
GTA353	1.35	1	25
Form 10			
GTA1101	$1.00	½	50
GTA2102	1.15	¾	25
GTA3103	1.45	1	25
Form 20			
GTA1201	$1.25	½	50
GTA2202	1.40	¾	25
GTA3203	1.80	1	25

Type GX



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GX151	$.90	½	100
GX252	1.00	¾	50
GX353	1.35	1	25
Form 10			
GX1101	$1.00	½	50
GX2102	1.15	¾	25
GX3103	1.45	1	25
Form 20			
GX1201	$1.25	½	50
GX2202	1.40	¾	25
GX3203	1.80	1	25

Type H

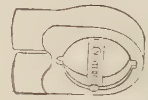


Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
H15	$.45	½	100
H25	.55	¾	50
H35	.80	1	25
Form 10			
H110	$.55	½	50
H210	.70	¾	25
H310	.90	1	25
Form 20			
H120	$.80	½	50
H220	.85	¾	25
H320	1.10	1	25

Type HA

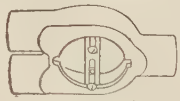
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
HA15	$.50	½	100
HA25	.60	¾	50
HA35	.85	1	25
Form 10			
HA110	$.60	½	50
HA210	.75	¾	25
HA310	.95	1	25
Form 20			
HA120	$.85	½	50
HA220	.90	¾	25
HA320	1.20	1	25

Type HH



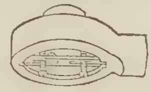
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
HH151	$.55	½	100
HH252	.65	¾	50
HH353	.90	1	25
Form 10			
HH1101	$.65	½	50
HH2102	.80	¾	25
HH3103	1.00	1	25
Form 20			
HH1201	$.90	½	50
HH2202	.95	¾	25
HH3203	1.20	1	25

Type HHC



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
HHC151	$.75	½	100
HHC252	.85	¾	50
HHC353	1.10	1	25
Form 10			
HHC1101	$.85	½	50
HHC2102	1.00	¾	25
HHC3103	1.20	1	25
Form 20			
HHC1201	$1.10	½	50
HHC2202	1.20	¾	25
HHC3203	1.50	1	25

Type HLA



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
HLA15	$.60	½	100
HLA25	.70	¾	50
HLA35	.95	1	25
Form 10			
HLA110	$.70	½	50
HLA210	.85	¾	25
HLA310	1.05	1	25
Form 20			
HLA120	$.95	½	50
HLA220	1.05	¾	25
HLA320	1.35	1	25

G-H Series Threadless Condulets

Schedule CR

With Adjustable Bar

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

Take covers or round base wiring devices. Furnished with adjustable bar.

Cadmium-galvanized is the standard finish.

Condulets of the G-H series with adjustable bar are compact, shallow, and the same diameter as the base of the largest wiring device for which each form is designed.

The adjustable bar is removable and should be attached to and centered on the wiring device. The wiring device is then centered on the body. The adjustable bar clamps it to the flange and securely holds it in position.

A gasket can be used between the cover or wiring device and the Condulet. Gaskets are not regularly furnished with these Condulets and, if desired, must be specifically ordered.

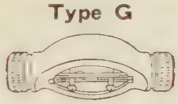
Fastening screws are furnished with and so retained in the covers that they cannot fall out.

Limiting Dimensions of Round Base Wiring Devices for Use with Condulets of the G-H Series with Adjustable Bar

	Form 5	Form 10
Diameter of Base................in.	2 to 2⅝	2⅜ to 3
Fastening Screw Spacing, Center to Center.........................in.	⅝ to 1⁹⁄₁₆	⅝ to 1⅞

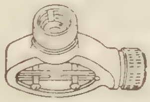
Forms 5 and 10 indicate sizes of Condulets which take covers and wiring devices correspondingly classified.

Type G



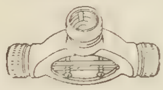
Size In.	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
Form 5					
½	100	G159	$.65	G154	$.65
¾	50	G259	.85	G254	.85
Form 10					
½	50	G119	$.75	G114	$.75
¾	25	G219	1.00	G214	1.00

Type GL



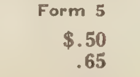
Form 5					
½	100	GL159	$.70	GL154	$.70
Form 10					
½	50	GL119	$.80	GL114	$.80

Type GT



Form 5					
½	100	GT159	$.90	GT154	$.90
¾	50	GT259	1.15	GT254	1.15

Type H



Form 5					
½	100	H159	$.50	H154	$.50
¾	50	H259	.65	.....	....
Form 10					
½	50	H119	$.60	H114	$.60

Condulet Covers

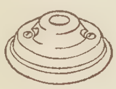
Schedule CR

For Condulets of the G-H Series with Adjustable Bar

Cadmium-galvanized is the standard finish on metal covers.

Standard package: Forms 5 and 10 assorted, 100; Form 20 assorted, 50.

Porcelain with Wire Holes

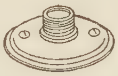


1-Wire

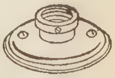
4-Wire

Cat. No.	Each	Style	Diameter Holes Inches
Forms 5 and 10			
5101	$.15	1-Wire	¹³⁄₃₂
5102	.15	2-Wire	⁵⁄₁₆
5103	.15	3-Wire	⁵⁄₁₆
510400	.15	4-Wire	⁵⁄₁₆
Form 20			
201	$.35	1-Wire	¹³⁄₃₂
202	.35	2-Wire	⁵⁄₁₆
203	.35	3-Wire	⁵⁄₁₆
20400	.35	4-Wire	⁵⁄₁₆

Sheet Steel with Brass Nipple



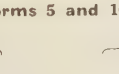
Male Nipple



Female Nipple

Size Nipple Inches	Male Cat. No.	Male Each	Female Cat. No.	Female Each
Forms 5 and 10				
⅛	5105	$.20	5106	$.20
¼	51013	.25	51014	.25
⅜	5107	.30	5108	.30
½	51015	.35	51016	.35
Form 20				
⅛	205	$.30	206	$.30
¼	2013	.35	2014	.35
⅜	207	.40	208	.40
½	2015	.45	2016	.45

Blank Metal



Sheet Steel Cat. No.	Sheet Steel Each	Cast Feraloy Cat. No.	Cast Feraloy Each
Forms 5 and 10			
51000	$.10	51000g	$.20
Form 20			
2000	$.25	2000g	$.35

Forms 5, 10, and 20 indicate the sizes of condulets which take the covers and wiring devices correspondingly classified.

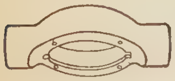
G-H Series Condulets

Schedule CR

Without Adjustable Bar

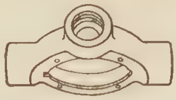
Take covers or wiring devices.
Cadmium-galvanized is the standard finish.

Type G



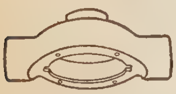
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
G157	$.40	½	100
G257	.50	¾	50
G357	.75	1	25
Form 10			
G117	$.50	½	50
G217	.65	¾	25
G317	.85	1	25
Form 20			
G127	$.70	½	50
G227	.75	¾	25
G327	1.00	1	25

Type GT



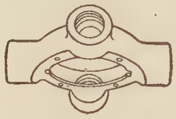
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GT157	$.60	½	100
GT257	.70	¾	50
GT357	.95	1	25
Form 10			
GT117	$.70	½	50
GT217	.85	¾	25
GT317	1.05	1	25
Form 20			
GT127	$.90	½	50
GT227	1.00	¾	25
GT327	1.30	1	25

Type GA



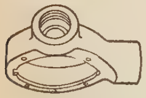
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GA157	$.60	½	100
GA257	.70	¾	50
GA357	.95	1	25
Form 10			
GA117	$.70	½	50
GA217	.85	¾	25
GA317	1.05	1	25
Form 20			
GA127	$.90	½	50
GA227	1.00	¾	25
GA327	1.30	1	25

Type GX



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GX157	$.75	½	100
GX257	.85	¾	50
GX357	1.20	1	25
Form 10			
GX117	$.85	½	50
GX217	1.00	¾	25
GX317	1.30	1	25
Form 20			
GX127	$1.05	½	50
GX227	1.20	¾	25
GX327	1.60	1	25

Type GL

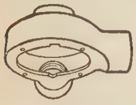


Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GL157	$.45	½	100
GL257	.55	¾	50
GL357	.80	1	25
Form 10			
GL117	$.55	½	50
GL217	.70	¾	25
GL317	.90	1	25
Form 20			
GL127	$.75	½	50
GL227	.85	¾	25
GL327	1.15	1	25

Type H

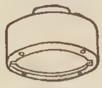
Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
H157	$.30	½	100
H257	.40	¾	50
H357	.65	1	25
Form 10			
H117	$.40	½	50
H217	.55	¾	25
H317	.75	1	25
Form 20			
H127	$.60	½	50
H227	.65	¾	25
H327	.90	1	25

Type GLA



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
GLA157	$.60	½	100
GLA257	.70	¾	50
GLA357	.95	1	25
Form 10			
GLA117	$.70	½	50
GLA217	.85	¾	25
GLA317	1.05	1	25
Form 20			
GLA127	$.90	½	50
GLA227	1.00	¾	25
GLA327	1.30	1	25

Type HA



Cat. No.	Each	Size In.	Std. Pkg.
Form 5			
HA157	$.35	½	100
HA257	.45	¾	50
HA357	.70	1	25
Form 10			
HA117	$.45	½	50
HA217	.60	¾	25
HA317	.80	1	25
Form 20			
HA127	$.65	½	50
HA227	.70	¾	25
HA327	1.00	1	25

G-H Series Threadless Condulets

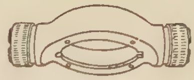
Schedule CR

Without Adjustable Bar

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

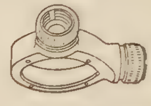
Cadmium-galvanized is the standard finish.

Type G



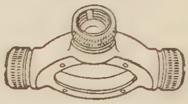
Size, In.	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
Form 5					
½	100	G1597	$.50	G1547	$.50
¾	50	G2597	.70	G2547	.70
Form 10					
½	50	G1197	$.60	G1147	$.60
¾	25	G2197	.85	G2147	.85

Type GL



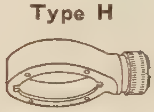
Size, In.	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
Form 5					
½	100	GL1597	$.55	GL1547	$.55
Form 10					
½	50	GL1197	$.65	GL1147	$.65

Type GT



Size, In.	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
Form 5					
½	100	GT1597	$.75	GT1547	$.75
¾	50	GT2597	1.00	GT2547	1.00

Type H



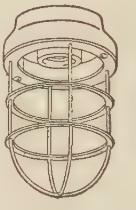
Size, In.	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
Form 5					
½	100	H1597	$.35	H1547	$.35
¾	50	H2597	.50	......	....
Form 10					
½	50	H1197	$.45	H1147	$.45

GH Midget Guard Fixtures

For Forms 5 and 20 Condulets of the G-H Series without Adjustable Bar

Cadmium-galvanized is the standard finish.

Non-Weatherproof

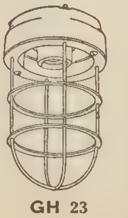


GH 14

Non-Weatherproof complete consists of holder No. GH 10, guard, receptacle No. H557 and gaskets.

Length Guard In.	Size Lamps	Std. Pkg.	Cat. No.	Each
3¾	15-Watt (A17) 25-Watt (A19)	25	GH13	$2.45
4⅝	40 and 50-Watt (A21)	25	GH14	2.75
5¼	60-Watt (A21)	25	GH15	2.80
6	100-Watt (A23)	25	GH16	3.35

Weatherproof



GH 23

Weatherproof complete consists of holder No. GH 20, guard, receptacle No. C337 and gaskets.

Length Guard In.	Size Lamps	Std. Pkg.	Cat. No.	Each
3¾	15-Watt (A17) 25-Watt (A19)	25	GH23	$2.90
4⅝	40 and 50-Watt (A21)	25	GH24	3.20
5¼	60-Watt (A21)	25	GH25	3.25
6	100-Watt (A23)	25	GH26	3.80

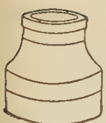
Condulet Wiring Devices

Schedule CR

For Form 5 Condulets of the G-H Series without Adjustable Bar

Lamp Receptacles With Connection Block

660 Watts, 600 Volts



With Groove

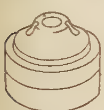
Without Groove

Made of porcelain.

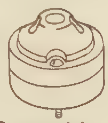
Cat. No.	Each	Style	Std. Pkg.
H546	$.50	With Shadeholder Groove	50
H547	.45	Without Shadeholder Groove	50

Cord Rosettes With Connection Block

660 Watts, 250 Volts



Porcelain



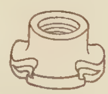
Composition

Cat. No.	Each	Style	Std. Pkg.
H553	$.40	Complete (Porcelain)	50
H554	.50	Complete (Composition)	50
H544	.20	Cap Only (Composition)	50

Lamp Receptacles Without Connection Block

660 Watts, 600 Volts

With Groove



Without Groove

These receptacles are one-piece, and are made of porcelain.

Cat. No.	Each	Style	Std. Pkg.
H556	$.25	With Shadeholder Groove	100
H557	.25	Without Shadeholder Groove	100

Gasket can be used between condulet and H556 or H557 lamp receptacle, making the installation weatherproof.

If specified on the order, lamp receptacle with lamp grip will be furnished at 10 cents advance in list price.

Covers

Schedule CR

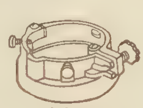
For Condulets of the G-H Series without Adjustable Bar

Cadmium-galvanized is the standard finish for metal covers.

Receptacle Covers Cast Feraloy

Take Lamp Receptacle H557

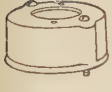
Witnout Holder



With Holder

Cat. No.	Each	Size	Style	Std. Pkg.
H558	$.50	Form 5	Without Shadeholder	50
H559	.80	Form 5	With Shadeholder (for 2¼-Inch Shades)	50

Takes Sign Receptacles



Takes sign receptacles with supporting screw spacing of 1$\frac{13}{16}$ inches. Diameter of hole in cover is 1⅜ inches.

Cat. No.	Each	Size	Std. Pkg.
H1032	$.50	Form 10	50

Porcelain Covers with Wire Holes

Standard package: Forms 5 and 10 assorted, 100; Form 20 assorted, 50.

Diameter of holes: 1-wire, $\frac{13}{32}$ inch; 2, 3 and 4-wire, $\frac{5}{16}$ inch.

Style	Form 5 Cat. No.	Form 5 Each	Form 10 Cat. No.	Form 10 Each	Form 20 Cat. No.	Form 20 Each
1-Wire	H51	$.20	H101	$.25	H201	$.40
2-Wire	H52	.20	H102	.25	H202	.40
3-Wire	H53	.20	H103	.25	H203	.40
4-Wire	H54	.20	H104	.25	H204	.40

Service Entrance Condulets

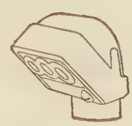
Schedule CM

Form 6

Threaded for heavy wall conduit.
Cadmium-galvanized is the standard finish.

Type F Caps

With Cover for 2 and 3-Wire Service



Size In.	Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Std. Pkg.	Carton
½	F163	$19.38	$24.25	$31.00	50	5
¾	F263	25.00	31.25	40.00	50	5
*1	F363	31.25	39.05	50.00	20	2
1¼	F463	46.88	58.60	58.60	10	1
1½	F563	65.00	81.25	81.25	5	1
2	F663	157.50	196.90	196.90	5	1
2½	F763	325.00	325.00	325.00	1	1
3	F863	540.00	540.00	540.00	1	1
3½	F963	665.00	665.00	665.00	1	1
4	F1063	1090.00	1090.00	1090.00	1	1

Type F, Form 6 service entrance caps can also be furnished with 4 or 5-wire covers in sizes up to and including 2 inches, at same price.

*Can be furnished with a smaller body for No. 8 wire, at same price by specifying No. F363-M1.

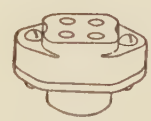
Type LB Elbows

With Blank Cast Cover

Size In.	Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Std. Pkg.	Carton
½	LB16	$21.88	$27.35	$35.00	50	5
¾	LB26	25.00	31.25	40.00	50	5
1	LB36	33.75	42.20	54.00	25	5
1¼	LB46	56.88	71.10	91.00	10	5
1½	LB56	103.75	129.70	129.70	3	1
2	LB666	152.50	152.50	152.50	1	1
2½	LB76	332.50	332.50	332.50	1	1

Type FBA End Fittings

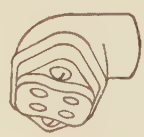
For 2, 3 and 4-Wire Service



Size In.	Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Std. Pkg.	Carton
½	FBA1	$6.88	$8.60	$11.00	100	20
¾	FBA2	8.75	10.95	14.00	100	20
1	FBA3	11.56	14.45	18.50	50	10
1¼	FBA4	50.00	62.50	80.00	25	5

Type FBB End Fittings

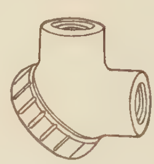
For 2, 3 and 4-Wire Service



Size In.	Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Std. Pkg.	Carton
½	FBB1	$16.25	$20.30	$26.00	50	10
¾	FBB2	20.63	25.80	33.00	50	10
1	FBB3	35.63	44.55	57.00	30	5
1¼	FBB4	51.25	64.05	69.45	25	5

Type LBY Elbows

With Screw Cover



Size In.	Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Std. Pkg.	Carton
½	LBY1	$18.75	$23.45	$30.00	50	10
¾	LBY2	21.88	27.35	35.00	50	5
1	LBY3	36.88	46.10	59.00	25	5
1¼	LBY4	71.25	89.05	114.00	10	5
1½	LBY5	95.00	95.00	118.75	5	5

Covers with Wire Holes for Type F Condulets

Composition
Form 6

Size In.	Cat. No.	Per 100 Std. Pkg.	Per 100 Less Std.	Per 100 Less Carton	Diam. Holes In.	Std. Pkg.	Carton
2 and 3-Wire							
½, ¾	2673	$4.85	$5.35	$6.70	$\frac{15}{32}$	50	10
1	3673	9.40	10.35	12.95	½	50	5
1¼	4673	13.80	15.20	19.00	$\frac{11}{16}$	25	5
1½	5673	24.60	27.10	27.10	$\frac{13}{16}$	10	1
2	6673	28.20	31.00	31.00	1	5	1
2½, 3	8673	39.40	39.40	39.40	1$\frac{7}{16}$	1	1
3½, 4	9673	50.65	50.65	50.65	1$\frac{15}{16}$	1	1
4-Wire							
½, ¾	2674	$4.85	$5.35	$6.70	$\frac{5}{16}$	50	10
1	3674	9.40	10.35	12.95	$\frac{13}{32}$	50	5
1¼	4674	13.80	15.20	19.00	$\frac{17}{32}$	25	5
1½	5674	24.60	27.10	27.10	⅝	10	1
2	6674	28.20	31.00	31.00	1	5	1
5-Wire							
½, ¾	2675	$4.85	$5.35	$6.70	⅝	50	10
1	3675	9.40	10.35	12.95	$\frac{13}{32}$	50	5
1¼	4675	13.80	15.20	19.00	$\frac{17}{32}$	25	5
1½	5675	24.60	27.10	27.10	⅝	10	1
2	6675	28.20	31.00	31.00	$\frac{13}{16}$	5	1

J-K Series Condulets

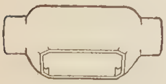
Schedule CR

Rigid conduit installations exposed to the weather require wiring devices that will prevent rain, ice, sleet, and snow from coming in contact with the current carrying parts. Condulets of the J-K Series meet all such requirements.

They take wiring devices or blank cover.

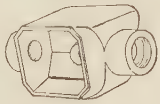
Cadmium-galvanized is the standard finish.

Type J



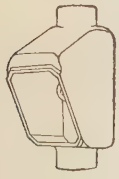
Cat. No.	Each	Size In.	Std. Pkg.
J1	$.60	½	100
J2	.75	¾	50
J3	1.05	1	25

Type JA



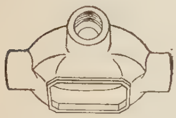
Cat. No.	Each	Size In.	Std. Pkg.
JA1	$.70	½	100
JA2	.85	¾	50
JA3	1.15	1	25

Type JB



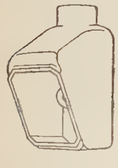
JB1	$.70	½	100
JB2	.85	¾	50
JB3	1.15	1	25

Type JT



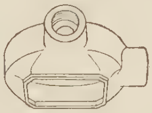
JT1	$.95	½	100
JT2	1.05	¾	50
JT3	1.15	1	25

Type KC



KC1	$.60	½	100
KC2	.75	¾	50
KC3	1.05	1	25

Type JL

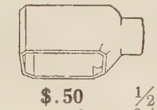


JL1	$.85	½	100
JL2	.95	¾	50
JL3	1.05	1	25

Type JU

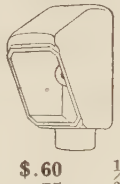
JU1	$.70	½	100
JU2	.85	¾	50
JU3	1.15	1	25

Type K



K1	$.50	½	100
K2	.65	¾	50
K3	.95	1	25

Type KD



KD1	$.60	½	100
KD2	.75	¾	50
KD3	1.05	1	25

J-K Series Threadless Condulets

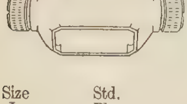
Schedule CR

Threadless and Threaded Condulets Take the Same Covers and Wiring Devices

Take wiring devices or blank cover.

Cadmium-galvanized is the standard finish.

Type J



Type K

			Thick Wall		Thin Wall	
Type	Size In.	Std. Pkg.	Cat. No.	Each	Cat. No.	Each
J	½	100	J19	$.78	J14	$.78
J	¾	50	J29	1.01	J24	1.01
K	½	100	K19	.59	K14	.59

Condulet Wiring Devices and Blank Covers

Schedule CR

For Condulets of the J-K Series

These wiring devices are weatherproof; therefore they can be installed either in or out of doors.

They are made in two parts, base and cap. The base is secured to the condulet by a single center screw. Direct connection to the circuit wires is made by two binding screws (entirely enclosed) on the base, eliminating soldered and taped joints. The cap of the lamp receptacle or rosette is secured to the base by two screws, which also complete the electrical connection. Lamp receptacles and rosettes have a common base. This construction permits changing from lamp receptacles to rosettes, or vice-versa, without disconnecting circuit wires.

The 2-pole attachment plug receptacles with double T slots take standard 15-ampere attachment plugs with parallel or tandem contact blades, or the parallel blade 15-ampere polarity plugs. The 2-pole attachment plug receptacles with IT slots take 15-ampere attachment plugs with tandem contact blades, or Hubbell 15-ampere polarity plug 6918.

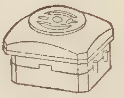
The fastening screws are furnished with and so retained in the wiring devices that they cannot fall out.

Made of porcelain and furnished with gasket.

Attachment Plug Receptacles

2-Pole

10 Amperes, 250 Volts
15 Amperes, 125 Volts



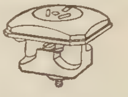
No. CC5 with Double T Slots

No. CC35 with IT Slots

Cat. No.	Each	Std. Pkg.
CC5	$.50	100
CC35	.50	100

3-Pole

10 Amperes, 250 Volts
15 Amperes, 125 Volts



3-Wire, 3-Pole

Cat. No.	Each	Std. Pkg.
CC13	$.70	100

2-Wire, 3-Pole

Extra pole grounded.

CC17	$.75	100

Polarity Plug Receptacle

2-Pole

20 Amperes, 250 Volts

CC20	$.65	100

Twist Lock Plug Receptacle

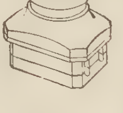
2-Pole

20 Amperes, 250 Volts

CC16	$.75	100

Lamp Receptacle

660 Watts, 600 Volts



No. CC227g with Shadeholder Groove

No. CC227 without Shadeholder Groove

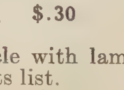
CC227g	$.45	100
CC227	.40	100

Cord Rosette

660 Watts, 250 Volts

CC332	$.50	100

Blank Cover Cast Feraloy



J100	$.30	100

If specified on the order, lamp receptacle with lamp grip will be furnished at an advance of 10 cents list.

Prices do not include attachment plugs for receptacles listed above.

GS Series Condulets

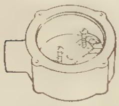
Schedule CR

Take covers, fixtures, round base snap switches, vapor-proof fixtures, plug receptacle housings, or connection blocks. Furnished with fastening strap for wiring devices.

Forms 5, 10 and 20 indicate sizes of condulets which take covers and wiring devices correspondingly classified.

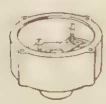
Cadmium-galvanized is the standard finish.

Type GS



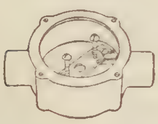
Cat. No.	Each	Size Inches	Form	Std. Pkg.
GS15	$.90	½	5	25
GS25	1.05	¾	5	25
GS35	1.25	1	5	10
GS110	1.00	½	10	25
GS210	1.15	¾	10	25
GS310	1.35	1	10	10
GS120	1.50	½	20	25
GS220	1.65	¾	20	25
GS320	1.85	1	20	10

Type GSA



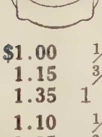
GSA15	$.90	½	5	25
GSA25	1.05	¾	5	25
GSA35	1.25	1	5	10
GSA110	1.00	½	10	25
GSA210	1.15	¾	10	25
GSA310	1.35	1	10	10
GSA120	1.50	½	20	25
GSA220	1.65	¾	20	25
GSA320	1.85	1	20	10

Type GSC



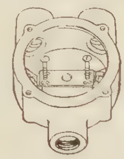
GSC15	$1.00	½	5	25
GSC25	1.15	¾	5	25
GSC35	1.35	1	5	10
GSC110	1.10	½	10	25
GSC210	1.25	¾	10	25
GSC310	1.45	1	10	10
GSC120	1.60	½	20	25
GSC220	1.75	¾	20	25
GSC320	1.95	1	20	10

Type GSS



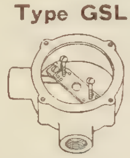
GSS15	$1.00	½	5	25
GSS25	1.15	¾	5	25
GSS35	1.35	1	5	10
GSS110	1.10	½	10	25
GSS210	1.25	¾	10	25
GSS310	1.45	1	10	10
GSS120	1.60	½	20	25
GSS220	1.75	¾	20	25
GSS320	1.95	1	20	10

Type GSSC



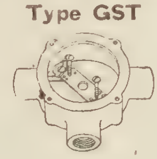
Cat. No.	Each	Size In.	Form	Std. Pkg.
GSSC15	$1.20	½	5	25
GSSC25	1.35	¾	5	25
GSSC35	1.55	1	5	10
GSSC110	1.30	½	10	25
GSSC210	1.50	¾	10	25
GSSC310	1.70	1	10	10
GSSC120	1.80	½	20	25
GSSC220	2.00	¾	20	25
GSSC320	2.30	1	20	10

Type GSL



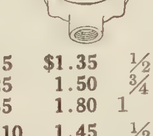
GSL15	$1.00	½	5	25
GSL25	1.15	¾	5	25
GSL35	1.35	1	5	10
GSL110	1.10	½	10	25
GSL210	1.25	¾	10	25
GSL310	1.45	1	10	10
GSL120	1.60	½	20	25
GSL220	1.75	¾	20	25
GSL320	1.95	1	20	10

Type GST



GST15	$1.20	½	5	25
GST25	1.35	¾	5	25
GST35	1.55	1	5	10
GST110	1.30	½	10	25
GST210	1.50	¾	10	25
GST310	1.70	1	10	10
GST120	1.80	½	20	25
GST220	2.00	¾	20	25
GST320	2.30	1	20	10

Type GSX



GSX15	$1.35	½	5	25
GSX25	1.50	¾	5	25
GSX35	1.80	1	5	10
GSX110	1.45	½	10	25
GSX210	1.70	¾	10	25
GSX310	2.10	1	10	10
GSX120	1.95	½	20	25
GSX220	2.20	¾	20	25
GSX320	2.70	1	20	10

GS Series Condulets

Schedule CR

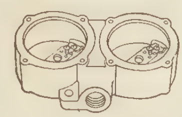
Two and Three-Gang

With Lugs

Take covers, fixtures, round base snap switches, vapor-proof fixtures, plug receptacle housings, or connection blocks furnished with fastening straps for wiring devices.

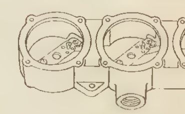
Cadmium-galvanized is the standard finish.

Type GSB
Two-Gang



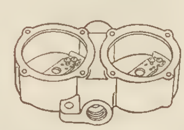
Cat. No.	Each	Size In.	Form	Std. Pkg.
GSB1529	$2.10	½	5	25
GSB2529	2.40	¾	5	25
GSB3529	2.80	1	5	10
GSB1129	2.30	½	10	25
GSB2129	2.60	¾	10	25
GSB3129	3.00	1	10	10
GSB1229	3.30	½	20	25
GSB2229	3.60	¾	20	25
GSB3229	4.00	1	20	10

Type GSB
Three-Gang



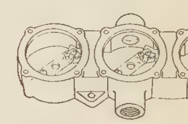
Cat. No.	Each	Size In.	Form	Std. Pkg.
GSB1539	$3.15	½	5	25
GSB2539	3.60	¾	5	25
GSB3539	4.20	1	5	10
GSB1139	3.45	½	10	25
GSB2139	3.90	¾	10	25
GSB3139	4.50	1	10	10
GSB1239	4.95	½	20	25
GSB2239	5.40	¾	20	25
GSB3239	6.00	1	20	10

Type GSD
Two-Gang



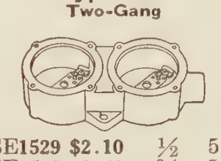
GSD1529	$2.30	½	5	25
GSD2529	2.60	¾	5	25
GSD3529	3.00	1	5	10
GSD1129	2.50	½	10	25
GSD2129	2.80	¾	10	25
GSD3129	3.20	1	10	10
GSD1229	3.50	½	20	25
GSD2229	3.80	¾	20	25
GSD3229	4.20	1	20	10

Type GSD
Three-Gang



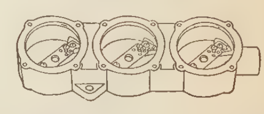
GSD1539	$3.45	½	5	25
GSD2539	3.90	¾	5	25
GSD3539	4.50	1	5	10
GSD1139	3.75	½	10	25
GSD2139	4.20	¾	10	25
GSD3139	4.80	1	10	10
GSD1239	5.25	½	20	25
GSD2239	5.70	¾	20	25
GSD3239	6.30	1	20	10

Type GSE
Two-Gang



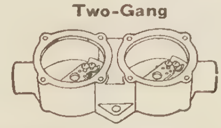
GSE1529	$2.10	½	5	25
GSE2529	2.40	¾	5	25
GSE3529	2.80	1	5	10
GSE1129	2.30	½	10	25
GSE2129	2.60	¾	10	25
GSE3129	3.00	1	10	10
GSE1229	3.30	½	20	25
GSE2229	3.60	¾	20	25
GSE3229	4.00	1	20	10

Type GSE
Three-Gang



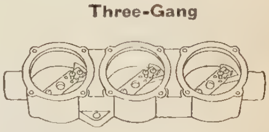
GSE1539	$3.15	½	5	25
GSE2539	3.60	¾	5	25
GSE3539	4.20	1	5	10
GSE1139	3.45	½	10	25
GSE2139	3.90	¾	10	25
GSE3139	4.50	1	10	10
GSE1239	4.95	½	20	25
GSE2239	5.40	¾	20	25
GSE3239	6.00	1	20	10

Type GSC
Two-Gang



GSC1529	$2.30	½	5	25
GSC2529	2.60	¾	5	25
GSC3529	3.00	1	5	10
GSC1129	2.50	½	10	25
GSC2129	2.80	¾	10	25
GSC3129	3.20	1	10	10
GSC1229	3.50	½	20	25
GSC2229	3.80	¾	20	25
GSC3229	4.20	1	20	10

Type GSC
Three-Gang



GSC1539	$3.45	½	5	25
GSC2539	3.90	¾	5	25
GSC3539	4.50	1	5	10
GSC1139	3.75	½	10	25
GSC2139	4.20	¾	10	25
GSC3139	4.80	1	10	10
GSC1239	5.25	½	20	25
GSC2239	5.70	¾	20	25
GSC3239	6.30	1	20	10

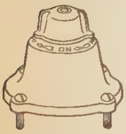
Condulet Covers

Schedule CR

For Condulets of the GS Series

Cadmium-galvanized is the standard finish.

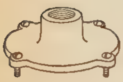
Vaporproof Switch Covers



Furnished with gasket.

Cat. No.	Each	Size	Std. Pkg.
GS58	$1.30	Form 5	25
GS108	1.40	Form 10	25
GS208	2.00	Form 20	25

Vaporproof Hub Covers



Furnished with gasket.

Cat. No. ⅜-In. Hub	Cat. No. ½-In. Hub	Each	Size	Std. Pkg.
GS53	GS54	$.60	Form 5	25
GS13	GS14	.70	Form 10	25
GS23	GS24	1.00	Form 20	25

Vaporproof Blank Covers

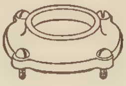
Furnished with gasket.

Cat. No.	Each	Size	Std. Pkg.
GS50	$.50	Form 5	25
GS100	.60	Form 10	25
GS200	.90	Form 20	25

Plug Receptacle Covers

For Bryant Marine Plug Receptacles

With Spring Door



Plain

Cat. No.	Each	Size	Style	Std. Pkg.
GS124	$1.10	Form 10	With Spring Door.........	25
GS123	.50	Form 10	Plain.....................	25

Lamp Receptacle Cover

Takes composition receptacle GS126 or GS1621.

Furnished with gasket for receptacle.

Cat No.	Each	Size	Std. Pkg.
GS109	$.60	Form 10	25

Lamp Receptacles

Schedule CR

For Condulets of the GS Series

Keyless Receptacles (Composition)

660 Watts, 600 Volts

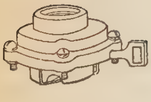
For Form 5 Condulets.

Consists of receptacle and gaskets.

Cat. No.	Each	Style	Std. Pkg.
GS59	$.50	Without Lamp Grip.......	25
GS569	.60	With Lamp Grip..........	25

Key Receptacle (Armored)

250 Watts, 250 Volts



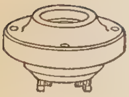
For Form 5 Condulets.

Consists of housing, receptacle C127, mounting strap, and insulating ring CF330.

GS549	$2.00	With Lamp Grip......	25

Keyless Receptacles (Composition)

660 Watts, 250 Volts



For Form 10 covers or fixtures.

Consists of receptacle only.

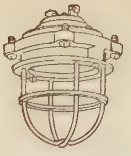
GS126	$.75	Without Lamp Grip...	25
GS1621	.85	With Lamp Grip......	25

Forms 5, 10 and 20 indicate sizes of Condulets which take covers and wiring devices correspondingly classified.

GS Midget Guard Fixtures

Schedule CR

For Form 10 Condulets of the GS Series

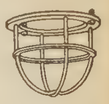


Complete

The fixture complete consists of holder No. GS111, guard, receptacle with lamp grip No. GS1621, and gaskets.

Cadmium-galvanized is the standard finish.

Standard package quantity, 25.



Guard Only

Length Guard In.	Size Lamps	Fixture Complete Cat. No.	Fixture Complete Each	Guard Only Cat. No.	Guard Only Each
3⅛	15-Watt (A17), 25-Watt (A19)	GS161	$2.80	GS93	$1.25
3¾	40-Watt (A21)	GS1629	3.05	GH3	1.50
4⅝	50-Watt (A21), (S19), 60-W. (A21)	GS1630	3.35	GH4	1.80
5¼	100-Watt (A23)	GS1631	3.40	GH5	1.85

Holder Only

Standard package quantity, 25.

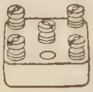
Cat. No. GS111, Holder Only.....................each $.80

Connection Blocks

Schedule CR

For Condulets of the GS Series

2-Wire Composition



5-Wire Composition

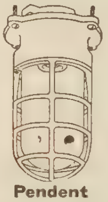
2-Wire Porcelain

Cat. No.	Each	Style	Rating Amps.	Rating Volts	Form	Std. Pkg.
Composition						
CF209	$.85	2-Wire	30	250	20	25
CF210	.65	5-Wire	20	125	10, 20	25
Porcelain						
GS32	$.75	2-Wire	20	250	20	25

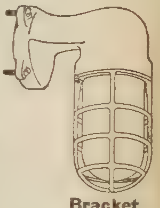
GS Vaporproof Fixtures

Schedule CR

For Form 20 Condulets of the GS Series



Pendent



Bracket

Form 20 Condulets of the GS series with vaporproof fixtures meet conditions where vapor, gas, or moisture exist, as in marine installations or cold storage plants.

Bodies are of liberal dimensions, providing ample space for making taps, for connections to fixtures, and for the passage of additional circuits. They are provided with blind screw holes for fastening covers or fixtures. A flat, unusually wide surface inside of the screw hole circle provides a good seat for the fixture gasket, insuring a gas and watertight joint.

Fixtures are furnished with receptacle, gaskets, and with or without globe and guard.

Cadmium-galvanized is the standard finish.

Form 75

Take 50-watt (PS20), 60-watt (A21), 75-watt (PS22), or 100-watt (A23) lamps.

Style	Std. Pkg.	Complete With Globe V75 and Guard V911 Cat. No.	Each	Complete except Globe and Guard Cat. No.	Each
Pendent	25	GS675	$6.10	GS6	$3.50
Bracket	25	GS775	6.10	GS7	3.50

Form 200

Take 100 or 150-watt (PS25), or 200-watt (PS30) lamps.

Style	Std. Pkg.	Complete With Globe V200 and Guard V912 Cat. No.	Each	Complete except Globe and Guard Cat. No.	Each
Pendent	25	GS8200	$6.80	GS8	$3.75
Bracket	25	GS9200	6.80	GS9	3.75

Type BRG Plug Receptacle Housings

Schedule CR

For Condulets of the GS Series

***30 Amperes, 250 Volts A.C.**

These housings take Type BP plugs. The 2-pole housings are furnished with 30-ampere, 250-volt receptacles BR1302 or BR302. The 3-pole housings are furnished with 30-ampere, 250-volt receptacles BR1303 or BR303.

Cadmium-galvanized is the standard finish for all plugs and receptacles. This insures a perfect ground connection between all metal parts in the grounding or safety circuit.

The threaded housings are furnished with round gaskets cemented in grooves. The gaskets are inside the screw circle, and the holes in the Condulets for the fastening screws are blind tapped; therefore when a watertight plug or the brass cap is used, the Condulet is absolutely vapor, gas, and dustproof.

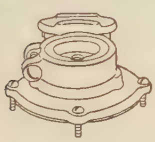
The plugs and receptacles are polarized. The receptacle housing is provided with a clip which makes contact with the shell of the plug, effectually grounding the plug through the conduit system.

The plug and receptacle contacts are self-aligning; the receptacle contacts are completely enclosed in a body of molded insulating material. The prongs of the plug are protected by a steel sleeve.

Grounding.—On the plugs used with these receptacles, provision is made for a grounding wire in the cable to connect the frame of the portable device to the shell of the plug. The grounding or safety circuit is completed through the shell of the plug, the detent spring, the receptacle housing, and the conduit system. The detent spring in the receptacle has three branches, two of which make contact before and break contact after the main circuit contacts. This method of grounding is N. E. C. standard.

Standard package quantity is 25.

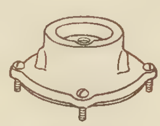
With Spring Door



Form 5

Cat. No.	Each	No. of Poles
BRG56302	$4.10	2
Form 10		
BRG16302	$4.20	2
BRG16303	5.05	3
Form 20		
BRG26302	$4.70	2
BRG26303	5.55	3

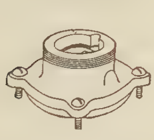
Plain



Form 5

Cat. No	Each	No. of Poles
BRG5302	$2.50	2
Form 10		
BRG1302	$2.60	2
BRG1303	3.25	3
Form 20		
BRG2302	$3.10	2
BRG2303	3.75	3

Threaded

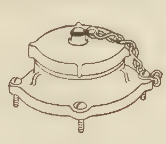


Furnished with gaskets.

Form 5

BRG57302	$2.70	2
Form 10		
BRG17302	$2.80	2
BRG17303	3.50	3
Form 20		
BRG27302	$3.30	2
BRG27303	4.00	3

With Aluminum Cap



Furnished with gaskets.

Form 5

BRG58302	$3.65	2
Form 10		
BRG18302	$3.75	2
BRG18303	4.85	3
Form 20		
BRG28302	$4.25	2
BRG28303	5.35	3

*Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

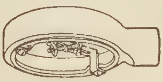
S Series Condulets

Schedule CR

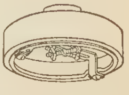
Take covers and wiring devices. Furnished with fastening strap for wiring devices.

Cadmium-galvanized is the standard finish.

Type S

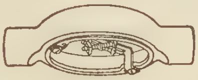


Type SA

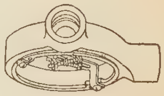


Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
S1	$.70	½	50	SA1	$.70	½	50
S2	.75	¾	50	SA2	.75	¾	50
S3	.90	1	25	SA3	.90	1	25

Type SC

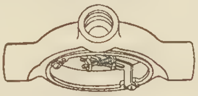


Type SL

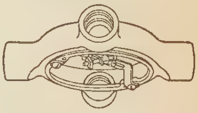


SC1	$.80	½	50	SL1	$.80	½	50
SC2	.85	¾	50	SL2	.85	¾	50
SC3	1.05	1	25	SL3	1.05	1	25

Type ST



Type SX



ST1	$.90	½	50	SX1	$1.00	½	50
ST2	1.00	¾	50	SX2	1.10	¾	50
ST3	1.20	1	25	SX3	1.35	1	25

Condulet Covers

Schedule CR

For Condulets of the S Series

Cadmium-galvanized is the standard finish.

Covers for Wiring Devices

Cat. No.	Each	Material	Std. Pkg.
00	$.12	Sheet Steel	50
00g	.35	Cast Feraloy	50
00k	.12	Sheet Steel	50
00kg	.35	Cast Feraloy	50
Blank Metal Covers			
00b	$.12	Sheet Steel	50
00bg	.35	Cast Feraloy	50

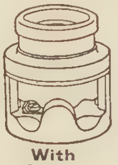
Condulet Wiring Devices

Schedule CR

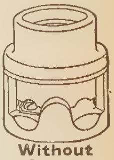
For Condulets of the S Series
Types ARB and GS Vaporproof Fixtures
Type GH Midget Guard Fixtures
Type SRH Holders

These devices eliminate soldered and taped joints. They have enclosed contacts and are made in two parts, base and cap. They have a common base, so one style of cap can be substituted for another without disconnecting circuit wires.

Lamp Receptacles



With Groove



Without Groove

660 Watts, 600 Volts

Furnished with gasket.

With Shadeholder Groove

Cat. No.	Each	Std. Pkg.
C337g	$.45	100
Without Shadeholder Groove		
C337	$.40	100

Cord Rosettes

660 Watts, 250 Volts

Furnished with gasket.

Cat. No.	Each	Std. Pkg.
C442	$.35	100

If specified on order, lamp receptacle with lamp grip will be furnished at 10 cents advance in list price.

SK Series Condulets

Schedule CR

For Concealed Installations in Concrete

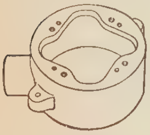
Take ARB vaporproof fixtures, blank covers, or covers with hubs, and are drilled and tapped to take 3¼-inch outlet box round base wiring devices with 2¾-inch screw centers.

The blank cover has countersunk fastening screw holes and is furnished with flat head screws. This makes the cover suitable for use in floors or sidewalks.

A gasket is made for use with blank covers, so that when used with condulets of the SK Series, an excellent water-tight junction box is provided.

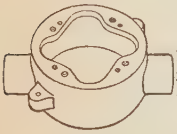
Elexits, Ben-ox fixtures and other wiring devices that have 4 fastening screw holes instead of 2 on 2¾-inch centers are given especially rigid support.

Cadmium-galvanized is the standard finish.



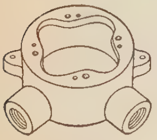
Type SK

Size In.	Std. Pkg.	2-Inch Depth Cat. No.	2-Inch Depth Each	3-Inch Depth Cat. No.	3-Inch Depth Each
½	50	SK12	$1.00	SK13	$1.15
¾	25	SK22	1.10	SK23	1.25
1	10	SK32	1.20	SK33	1.35



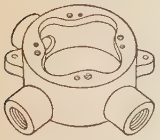
Type SKC

½	50	SKC12	$1.10	SKC13	$1.25
¾	25	SKC22	1.20	SKC23	1.35
1	10	SKC32	1.30	SKC33	1.45



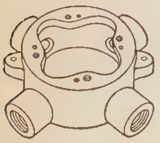
Type SKL

½	50	SKL12	$1.10	SKL13	$1.25
¾	25	SKL22	1.20	SKL23	1.35
1	10	SKL32	1.30	SKL33	1.45



Type SKT

½	50	SKT12	$1.20	SKT13	$1.35
¾	25	SKT22	1.30	SKT23	1.45
1	10	SKT32	1.40	SKT33	1.55



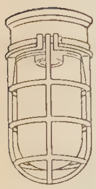
Type SKX

½	50	SKX12	$1.30	SKX13	$1.45
¾	25	SKX22	1.40	SKX23	1.55
1	10	SKX32	1.50	SKX33	1.65

ARB Vaporproof Fixtures

For Condulets of the SK Series, or 3¼ or 4-Inch Outlet Boxes

Furnished with globe, guard, receptacle and gaskets. Regularly furnished with clear globes, can be furnished with colored globes at an additional charge.



Form 75

Furnished with Globe V75 and Guard V97, and takes 50-watt (PS20), 60-watt (A21), 75-watt (PS22), or 100-watt (A23) lamps.

Form 200

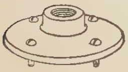
Furnished with Globe V200 and Guard VH99, and takes 100 or 150-watt (PS25), or 200-watt (PS30) lamps.

Form 75 Cat. No.	Each	Std. Pkg.	Form 200 Cat. No.	Each	Std. Pkg.
ARB43	$4.10	25	ARB41	$4.75	25

For prices without globe and guard, deduct $2.60 from price of Form 75, and $3.05 from price of Form 200.

Covers

For Condulets of the SK Series



Blank Style

Cat. No.	Each	Size, In.	Std. Pkg.
SK809	$.30	..	50

Hub Style

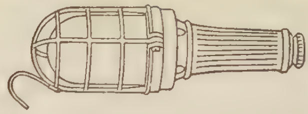
Cat. No.	Each	Size, In.	Std. Pkg.
SK83	$.65	⅜	50
SK84	.65	½	50
SK86	.75	¾	50

Type VS Vaporproof Portable Hand Lamps

Schedule CR

Clamp Guard

With Terminal for Ground Wire



Type VS Portable Hand Lamps are suited for use in garages, refineries, bakeries, flour mills, grain elevators, marine work or wherever inflammable vapor, dust or moisture is present.

The guard and globe holder are made of cast aluminum; the handle of molded rubber; and the gland nut of molded composition.

The rubber handle has sufficient flexibility to prevent breakage when subjected to rough usage, yet is sufficiently rigid to function as a satisfactory grip. Temperatures are not excessive.

Furnished with globe, guard, receptacle, gasket and vaporproof gland in handle.

Standard package quantity is 20.

Complete with Globe V15 and Guard VS95

Takes 60-watt (A21) lamps or any lamp not exceeding 2¾x5⅜ inches.

Cat. No.	Each	Diameter Cable, In.
VS23	$6.15	.250 to .375
VS24	6.15	.375 to .500
VS25	6.15	.500 to .625

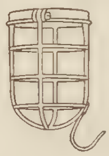
Complete with Globe V75 and Guard VS97

Takes 100-watt (A25) lamps, or any lamp not exceeding 2⅞x6$\frac{1}{16}$ inches.

Cat. No.	Each	Diameter Cable, In.
VS33	$6.15	250 to .375
VS34	6.15	.375 to .500
VS35	6.15	.500 to .625

Guards

For Type VS Portable Hand Lamp



Cat. No.	Each	For Globe Inches
VS95	$2.00	5¼
VS97	2.00	6¾

Globes

For Type VS Portable Hand Lamp

Cat. No.	Each	Length Globe Inches
V15	$.80	5¼
V75	.80	6¾

Safety Hand Lamps

Schedule CR

With Grounding Terminal

Take 15 to 60-watt (A17 A19, A21, P19, PS20, S17, S19, or S21) lamps.

Nos. LPG24 and LPH24 Safety Hand Lamps are constructed to withstand the severe service encountered in railroad shops, garages, industrial plants, storehouses, etc.

A terminal is provided for a safety circuit wire in the connecting cord for grounding the guard and other metal parts not connected with the electrical circuit.

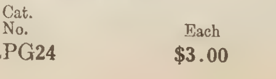
Handle is well seasoned maple, black enameled. A metal bracket on which ground terminal is mounted also provides a cord strain relief and support for lamp socket as a unit.

The guard and half shade are made of aluminum alloy.

A compression washer prevents a twisted lamp cord from turning the lamp out of a set position.

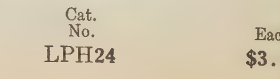
Standard package quantity is 20.

Type LPG, with Guard



Cat. No.	Each
LPG24	$3.00

Type LPH, with Guard and Half Shade



Cat. No.	Each
LPH24	$3.15

Condulet Vaporproof Industrial Fixtures

Schedule CR

Clamp Guard

Regularly furnished with clear globes. If specified, colored globes can be substituted at an extra charge.

A reflector can be used with any of these condulets by omitting the guard regularly furnished and substituting the proper combination of reflector and reflector holder.

A reflector and guard can be used with any of these condulets by omitting the guard regularly furnished and substituting the proper combination of guard with reflector holder and reflector.

Cadmium-galvanized is the standard finish.

Standard package quantity is 10.

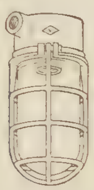
Form 75

Furnished with Globe V75 and Guard V97, and takes 50-watt (PS20), 60-watt (A21), 75-watt (PS22), or 100-watt (A23) lamps.

Form 200

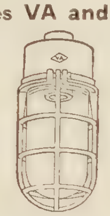
Furnished with Globe V200 and Guard VH99, and takes 100 or 150-watt (PS25), or 200-watt (PS30) lamps.

Types V and VH



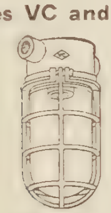
Cat. No.	Each	Size In.
Form 75		
V189	$4.50	½
V289	4.55	¾
V389	4.60	1
Form 200		
VH189	$5.40	½
VH289	5.45	¾
VH389	5.50	1

Types VA and VHA



Cat. No.	Each	Size In.
Form 75		
VA189	$4.50	½
VA289	4.55	¾
VA389	4.60	1
Form 200		
VHA189	$5.40	½
VHA289	5.45	¾
VHA389	5.50	1

Types VC and VHC



Cat. No.	Each	Size In.
Form 75		
VC1189	$4.60	½
VC2289	4.70	¾
VC3389	4.80	1
Form 200		
VHC1189	$5.50	½
VHC2289	5.60	¾
VHC3389	5.65	1

Types VL and VHL

Cat. No.	Each	Size In.
Form 75		
VL1189	$4.60	½
VL2289	4.70	¾
VL3389	4.80	1
Form 200		
VHL1189	$5.50	½
VHL2289	5.60	¾
VHL3389	5.65	1

Types VT and VHT

Cat. No.	Each	Size In.
Form 75		
VT11189	$4.75	½
VT22289	4.85	¾
VT33389	5.05	1
Form 200		
VHT11189	$5.60	½
VHT22289	5.75	¾
VHT33389	5.85	1

Types VX and VHX

Cat. No.	Each	Size In.
Form 75		
VX111189	$4.85	½
VX222289	5.05	¾
VX333389	5.20	1
Form 200		
VHX111189	$5.70	½
VHX222289	5.90	¾
VHX333389	6.05	1

Lamp receptacle with lamp grip can be furnished at 10 cents extra; pigtail receptacle can be furnished at 35 cents extra for Form 75, and 45 cents extra for Form 200.

Above condulets without globe and guard, deduct $2.60 from prices of Form 75, and $3.05 from prices of Form 200.

Condulet Vaporproof Industrial Fixtures

Schedule CR

Clamp Guard

Regularly furnished with clear globes.

Colored globes can be substituted at an extra charge. A reflector can be used by omitting the guard regularly furnished and substituting the proper combination of reflector and reflector holder. A reflector and guard can be used by omitting guard regularly furnished and substituting the proper combination of guard with reflector holder and reflector.

Cadmium-galvanized is the standard finish.

Standard package quantity is 10.

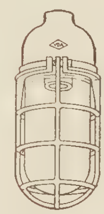
Form 75

Furnished with Globe V75 and Guard V97, and takes 50-watt (PS20), 60-watt (A21), 75-watt (PS22), or 100-watt (A23) lamps.

Form 200

Furnished with Globe V200 and Guard VH99, and takes 100 or 150-watt (PS25), or 200-watt (PS30) lamps.

Types VDA and VHDA

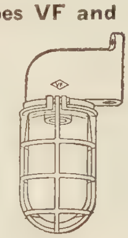


Cat. No.	Each	Size In.
Form 75		
VDA189	$4.50	½
VDA289	4.55	¾
VDA389	4.60	1
Form 200		
VHDA189	$5.40	½
VHDA289	5.45	¾
VHDA389	5.50	1

Types VE and VHE

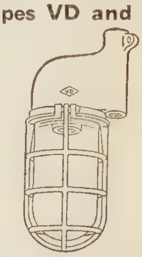
Cat. No.	Each	Size In.
Form 75		
VE189	$4.75	½
VE289	4.85	¾
VE389	4.95	1
Form 200		
VHE189	$5.50	½
VHE289	5.60	¾
VHE389	5.70	1

Types VF and VHF



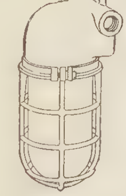
Cat. No.	Each	Size In.
Form 75		
VF189	$4.90	½
VF289	5.00	¾
VF389	5.10	1
Form 200		
VHF189	$5.75	½
VHF289	5.85	¾
VHF389	5.95	1

Types VD and VHD



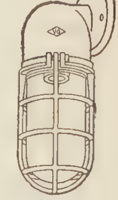
Cat. No.	Each	Size In.
Form 75		
VD1189	$5.15	½
VD2289	5.25	¾
VD3389	5.35	1
Form 200		
VHD1189	$5.90	½
VHD2289	6.00	¾
VHD3389	6.10	1

Types VJ and VHJ



Cat. No.	Each	Size In.
Form 75		
VJ1189	$5.15	½
VJ2289	5.25	¾
VJ3389	5.35	1
Form 200		
VHJ1189	$5.90	½
VHJ2289	6.00	¾
VHJ3389	6.10	1

Types VG and VHG



Cat. No.	Each	Size In.
Form 75		
VG189	$4.75	½
VG289	4.85	¾
VG389	4.95	1
Form 200		
VHG189	$5.50	½
....	.....	...
....	.....	...

Lamp receptacle with lamp grip can be furnished at 10 cents extra; pigtail receptacle can be furnished at 35 cents extra for Form 75, and 45 cents extra for Form 200. Above condulets without globe and guard, deduct $2.60 from prices of Form 75, and $3.05 from prices of Form 200.

Condulet Vaporproof Industrial Fixtures

Schedule CR

Screw Guard

Regularly furnished with clear globes. Colored globes will be substituted at the difference in list prices.

Cadmium-galvanized is the standard finish.

Forms 75 and 200 indicate sizes of condulets.

High temperature wire should be used with lamps larger than 75 watts in Form 75 or 100 watts in Form 200.

Standard package, 10.

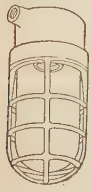
Form 75

Furnished with or without globe V75 and guard V911, and takes 50-watt (PS20), 60-watt (A21), 75-watt (PS22), or 100-watt (A23) lamps.

Form 200

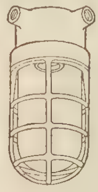
Furnished with or without globe V200 and guard V912, and takes 100 or 150-watt (PS25), or 200-watt (PS30) lamps.

Type V



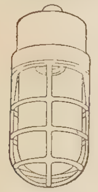
Cat. No.	Each	Size In.
Form 75		
V1759	$4.50	½
V2759	4.55	¾
V3759	4.60	1
Form 200		
V12009	$5.40	½
V22009	5.45	¾
V32009	5.50	1

Type VL



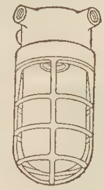
Cat. No.	Each	Size In.
Form 75		
VL1759	$4.60	½
VL2759	4.70	¾
VL3759	4.80	1
Form 200		
VL12009	$5.50	½
VL22009	5.60	¾
VL32009	5.65	1

Type VA



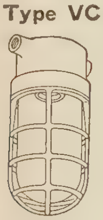
Form 75		
VA1759	$4.50	½
VA2759	4.55	¾
VA3759	4.60	1
Form 200		
VA12009	$5.40	½
VA22009	5.45	¾
VA32009	5.50	1

Type VT



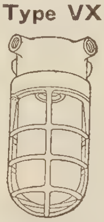
Form 75		
VT1759	$4.75	½
VT2759	4.85	¾
VT3759	5.05	1
Form 200		
VT12009	$5.60	½
VT22009	5.75	¾
VT32009	5.85	1

Type VC



Form 75		
VC1759	$4.60	½
VC2759	4.70	¾
VC3759	4.80	1
Form 200		
VC12009	$5.50	½
VC22009	5.60	¾
VC32009	5.65	1

Type VX



Form 75		
VX1759	$4.85	½
VX2759	5.05	¾
VX3759	5.20	1
Form 200		
VX12009	$5.70	½
VX22009	5.90	¾
VX32009	6.05	1

Lamp receptacle with lamp grip can be furnished at 10 cents extra; pigtail receptacle can be furnished at 35 cents extra for Form 75, and 45 cents extra for Form 200.

Equipped with key socket, operated by external handle at an advance in list of $1.00.

Above condulets without globe and guard, deduct $2.60 from prices of Form 75, and $3.05 from prices of Form 200.

Condulet Vaporproof Industrial Fixtures

Schedule CR

Screw Guard

Regularly furnished with clear globes. Colored globes will be substituted at the difference in list prices.

Cadmium-galvanized is the standard finish.

Forms 75 and 200 indicate sizes of condulets.

High temperature wire should be used with lamps larger than 75 watts in Form 75 or 100 watts in Form 200.

Standard package, 10.

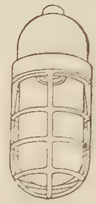
Form 75

Furnished with or without globe V75 and guard V911, and takes 50-watt (PS20), 60-watt (A21), 75-watt (PS22), or 100-watt (A23) lamps.

Form 200

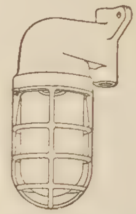
Furnished with or without globe V200 and guard V912, and takes 100 or 150-watt (PS25), or 200-watt (PS30) lamps.

Type VDA



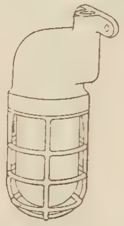
Cat. No.	Each	Size In.
Form 75		
VDA1759	$4.50	½
VDA2759	4.55	¾
VDA3759	4.60	1
Form 200		
VDA12009	$5.40	½
VDA22009	5.45	¾
VDA32009	5.50	1

Type VD



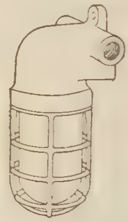
Cat. No.	Each	Size In.
Form 75		
VD1759	$5.15	½
VD2759	5.25	¾
VD3759	5.35	1
Form 200		
VD12009	$5.90	½
VD22009	6.00	¾
VD32009	6.10	1

Type VE



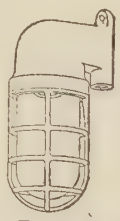
Form 75		
VE1759	$4.75	½
VE2759	4.85	¾
Form 200		
VE12009	$5.50	½
VE22009	5.60	¾

Type VJ



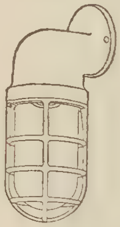
Form 75		
VJ1759	$5.15	½
VJ2759	5.25	¾
VJ3759	5.35	1
Form 200		
VJ12009	$5.90	½
VJ22009	6.00	¾
VJ32009	6.10	1

Type VF



Form 75		
VF1759	$4.90	½
VF2759	5.00	¾
Form 200		
VF12009	$5.75	½
VF22009	5.85	¾

Type VG



Form 75		
VG1759	$4.75	½
Form 200		
VG12009	$5.50	½

Lamp receptacle with lamp grip can be furnished at 10 cents extra; pigtail receptacle can be furnished at 35 cents extra for Form 75, and 45 cents extra for Form 200.

Equipped with key socket, operated by external handle at an advance in list of $1.00.

Above condulets without globe and guard, deduct $2.60 from prices of Form 75, and $3.05 from prices of Form 200.

Accessories and Parts

Schedule CR

For Condulets of the V Series and Other Vaporproof Fixtures

Globes for Screw and Clamp Guard

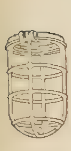
Color Globe	Std. Pkg.	Form 75 Cat. No.	Form 75 Each	Form 200 Cat. No.	Form 200 Each
Clear	20	V75	$.80	V200	$.80
Opal	20	VN71	1.10	VO201	1.70
Green	20	VN72	1.70	VO202	2.35
Blue	20	VN73	1.70	VO203	2.35
Orange	20	VN74	1.70	VO204	2.35
Ruby	20	VN75	1.70	VO205	2.35

Pyrex Globes for Screw and Clamp Guard

Heat resisting.

Clear	20	V63	$1.25	V93	$2.00

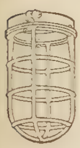
Guards



Made of cast aluminum.

Size	Std. Pkg.	Clamp Guard Cat. No.	Clamp Guard Each	Screw Guard Cat. No.	Screw Guard Each
Form 75	20	V97	$1.80	V911	$1.80
Form 200	20	VH99	2.25	V912	2.25

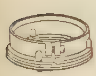
Guards with Reflector Holders



Made of cast aluminum.

Form 75	20	V913	$1.80	.....	....
Form 200	20	VH914	2.25	.....	....

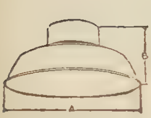
Reflector Holders



Made of cast aluminum. For clamping reflector to condulet when a guard is not used.

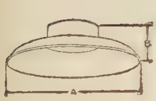
Form 75	20	V625	$.50	V901	$.75
Form 200	20	VH626	.65	V902	.90

RLM Dome Reflectors



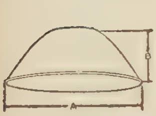
Cat. No.	Each	Dimen. A	Size Lamps	Std. Pkg.
Form 75				
SH26	$2.75	12	50-W. (PS20) 60-W. (A21)	10
SH27	3.00	12	75-W. (PS22) 100-W. (A23)	10
Form 200				
SH28	$3.25	14	100 or 150-W. (PS25)	10
SH29	3.75	16	200-W. (PS30)	10

Shallow Bowl Reflectors



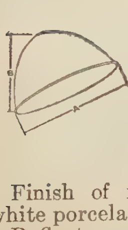
Cat. No.	Each	Dimen. A	Size Lamps	Std. Pkg.
Form 75				
SH56	$2.25	12	50-W. (PS20) 60-W. (A21)	10
SH57	2.50	12	75-W. (PS22) 100-W. (A23)	10
Form 200				
SH58	$2.75	14	100 or 150-W. (PS25)	10
SH59	3.25	16	200-W. (PS30)	10

Deep Bowl Reflectors



Cat. No.	Each	Dimen. A	Size Lamps	Std. Pkg.
Form 75				
SH46	$2.75	12	50-W. (PS20) 60-W. (A21)	10
SH47	3.00	13	75-W. (PS22) 100-W. (A23)	10
Form 200				
SH48	$3.25	14	100 or 150-W. (PS25)	10
SH49	3.75	15	200-W. (PS30)	10

30° Angle Reflectors



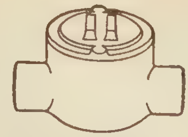
Cat. No.	Each	Dimen. A	Size Lamps	Std. Pkg.
Form 75				
SH66	$2.00	10	50-W. (PS20) 60-W. (A21)	10
SH67	2.50	12	75-W. (PS22) 100-W. (A23)	10
Form 200				
SH68	$3.50	15	100 or 150-W. (PS25) 200-W. (PS30)	10

Finish of reflectors: Green porcelain enamel outside, white porcelain enamel inside.

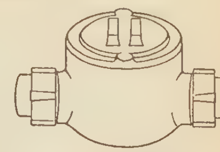
Reflectors are securely clamped to condulet by reflector holders V625 or VH626. Reflector holders not required if guard is used.

GUA Series Explosion-Proof Junction Condulets

Schedule CE



Type GUAC
With Threaded Hubs



Type GUAC
With Union Hubs

Furnished with surface cover.
Standard finish, cadmium-galvanized.

Size In.	With Threaded Hubs Cat. No.	Each	With Union Hubs Cat. No.	Each	Nom. Diam. Cover Opening In.	Outside Dimens. of Body, In. Diam.	Depth
Type GUAC							
1/2	GUAC14	$1.55	....	....	2	2½	1¾
1/2	....	....	GUAC64	$2.25	2	2½	1 15/16
3/4	GUAC24	1.65	GUAC74	2.25	2	2½	1 15/16
3/4	GUAC26	2.00	GUAC76	2.60	3	3½	1 15/16
1	GUAC36	2.10	GUAC86	3.10	3	3½	2¼
1¼	GUAC47	3.40	....	....	3⅝	4¼	2⅝
Type GUAB							
1/2	GUAB14	$1.55	....	....	2	2½	1¾
1/2	....	....	GUAB64	$2.25	2	2½	1 15/16
1/2	GUAB16	1.90	GUAB66	2.60	3	3½	1 15/16
3/4	GUAB24	1.65	GUAB74	2.25	2	2½	1 15/16
3/4	GUAB26	2.00	GUAB76	2.60	3	3½	1 15/16
Type GUAD							
1/2	GUAD14	$1.65	....	....	2	2½	1¾
1/2	....	....	GUAD64	$2.70	2	2½	1 15/16
1/2	GUAD16	2.00	GUAD66	3.05	3	3½	1 15/16
3/4	GUAD24	1.80	GUAD74	2.70	2	2½	1 15/16
3/4	GUAD26	2.15	GUAD76	3.05	3	3½	1 15/16
Type GUAL							
1/2	GUAL14	$1.55	....	....	2	2½	1¾
1/2	....	....	GUAL64	$2.25	2	2½	1 15/16
3/4	GUAL24	1.65	GUAL74	2.25	2	2½	1 15/16
1	GUAL36	2.10	GUAL86	3.10	3	3½	2¼
1¼	GUAL47	3.40	....	....	3⅝	4¼	2⅝
Type GUAM							
1/2	GUAM14	$1.65	....	....	2	2½	1¾
1/2	....	....	GUAM64	$2.70	2	2½	1 15/16
1/2	GUAM16	2.00	GUAM66	3.05	3	3½	1 15/16
3/4	GUAM24	1.80	GUAM74	2.70	2	2½	1 15/16
3/4	GUAM26	2.15	GUAM76	3.05	3	3½	1 15/16
Type GUAN							
1/2	GUAN14	$1.55	....	....	2	2½	1¾
1/2	....	....	GUAN64	$2.25	2	2½	1 15/16
3/4	GUAN24	1.65	GUAN74	2.25	2	2½	1 15/16
1	GUAN36	2.10	GUAN86	3.10	3	3½	2¼
1¼	GUAN47	3.40	....	....	3⅝	4¼	2⅝
Type GUAT							
1/2	GUAT14	$1.65	....	....	2	2½	1¾
1/2	....	....	GUAT64	$2.70	2	2½	1 15/16
1/2	GUAT16	2.00	GUAT66	3.05	3	3½	1 15/16
3/4	GUAT24	1.80	GUAT74	2.70	2	2½	1 15/16
3/4	GUAT26	2.15	GUAT76	3.05	3	3½	1 15/16
1	GUAT37	3.50	GUAT87	5.00	3⅝	4¼	2¼
1¼	GUAT49	7.25	....	....	5	5⅝	2⅝
1¼	....	....	GUAT99	11.00	5	5⅝	3
Type GUAW							
1/2	GUAW14	$1.75	....	....	2	2½	1¾
1/2	....	....	GUAW64	$3.15	2	2½	1 15/16
1/2	GUAW16	2.10	GUAW66	3.50	3	3½	1 15/16
3/4	GUAW24	1.95	GUAW74	3.15	2	2½	1 15/16
3/4	GUAW26	2.30	GUAW76	3.50	3	3½	1 15/16

GUA Series Explosion-Proof Junction Condulets

Schedule CE

Furnished with surface cover.
Standard finish, cadmium-galvanized.

Type GUAX

Size In.	With Threaded Hubs Cat. No.	Each	With Union Hubs Cat. No.	Each	Diam. Cover Opening	Outside Dimens. of Body, In. Diam.	Depth
½	GUAX14	$1.75	....	....	2	2½	1¾
½	....	....	GUAX64	$3.15	2	2½	1$\frac{15}{16}$
½	GUAX16	2.10	GUAX66	3.50	3	3½	1$\frac{15}{16}$
¾	GUAX24	1.95	GUAX74	3.15	2	2½	1$\frac{15}{16}$
¾	GUAX26	2.30	GUAX76	3.50	3	3½	1$\frac{15}{16}$
1	GUAX37	3.70	GUAX87	5.70	3⅝	4¼	2¼
1¼	GUAX49	7.50	....	....	5	5⅝	2⅝
1¼	....	....	GUAX99	12.50	5	5⅝	3

*Type GUAG

With Union Hubs

Without Nuts and Sleeves Cat. No.	Each	With Nuts and Sleeves Hub Sizes A-B-C-D-E-F	Cat. No.	Each
GUAG706	$2.30	½–½–½	GUAG6666	$3.05
		¾–¾–¾	GUAG7776	3.05
		½–¾–¾	GUAG6776	3.05
		¾–½–½	GUAG7666	3.05
		½–¾–½	GUAG6766	3.05

*Type GUAH

With Union Hubs

Without Nuts and Sleeves Cat. No.	Each	Hub Sizes A-B-C-D-E-F	Cat. No.	Each
GUAH706	$2.50	½–½–½–½	GUAH66666	$3.50
		¾–¾–¾–¾	GUAH77776	3.50
		½–½–¾–¾	GUAH66776	3.50
		½–½–¾–½	GUAH66766	3.50

*Type GUAP

With Union Hubs

Without Nuts and Sleeves Cat. No.	Each	Hub Sizes A-B-C-D-E-F	Cat. No.	Each
GUAP706	$2.70	½–½–½–¾–½	GUAP666766	$3.95
		½–½–½–1–½	GUAP666866	3.95
		½–½–¾–¾–¾	GUAP667776	3.95
		½–½–¾–1–¾	GUAP667876	3.95
		¾–¾–¾–¾–¾	GUAP777776	3.95
		¾–¾–¾–1–¾......	GUAP777876	3.95
GUAP7806	$2.90	½–½–1–1–1	GUAP668886	4.45
		¾–¾–1–1–1	GUAP778886	4.45

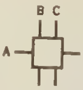
*Type GUAQ

With Union Hubs

Without Nuts and Sleeves Cat. No.	Each	Hub Sizes A-B-C-D-E-F	Cat. No.	Each
GUAQ706	$2.70	½–½–½–¾–½	GUAQ666766	$3.95
		½–½–½–1–½	GUAQ666866	3.95
		½–½–¾–¾–¾	GUAQ667776	3.95
		½–½–¾–1–¾	GUAQ667876	3.95
		¾–¾–¾–¾–¾	GUAQ777776	3.95
		¾–¾–¾–1–¾	GUAQ777876	3.95

*Type GUAF

With Union Hubs

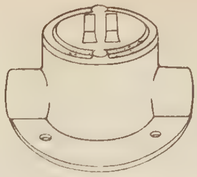


Without Nuts and Sleeves Cat. No.	Each	Hub Sizes A-B-C-D-E-F	Cat. No.	Each
GUAF706	$2.90	½–½–½–½–½–½	GUAF6666666	$4.40
		½–¾–¾–½–¾–¾	GUAF6776776	4.40
		½–½–½–½–¾–¾	GUAF6666776	4.40
		¾–¾–¾–¾–¾–¾	GUAF7777776	4.40
		¾–½–½–¾–½–½	GUAF7667666	4.40
		¾–½–½–¾–¾–¾	GUAF7667776	4.40

*Outside dimensions of body: Length 3¾ in., depth 1$\frac{15}{16}$ in. at corners, 3⅛ in. over covers; nominal diameter of cover opening 3 in. Width-Type GUAQ 5⅝ in.; all other types 3¾ in.

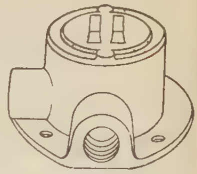
GUF Series Explosion-Proof Junction Condulets

Schedule CE



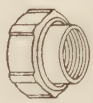
Type GUFC

Furnished with surface cover and threaded hubs.
Standard finish, cadmium-galvanized.



Type GUFL

	Size In.	Cat. No.	Each	Diam. Cover Opening	Outside Dimens. of Body, In. Diam.	Depth
Type GUFC	¾	GUFC26	$2.40	3	3½	1$\frac{15}{16}$
	1	GUFC36	2.60	3	3½	2¼
	1	GUFC39	3.65	5	5⅝	2¼
Type GUFL	¾	GUFL26	$2.40	3	3½	1$\frac{15}{16}$
Type GUFT	¾	GUFT26	$2.60	3	3½	1$\frac{15}{16}$
Type GUFX	¾	GUFX26	$2.80	3	3½	1$\frac{15}{16}$



Union Hub Nuts and Sleeves

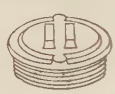
For Condulets of the GUA Series

Nuts and Sleeves Nut In.	Sleeve In.	Cat. No.	Each	Nuts Only Size In.	Cat. No.	Each	Sleeves Only Size In.	Cat. No.	Each
¾	½	GUH212	$.25	¾	GUH02	$.10	½	GUH 1	$.15
¾	¾	GUH222	.25	¾	GUH02	.10	¾	GUH 2	.15
1	½	GUH313	.35	1	GUH03	.12	½	GUH31	.23
1	¾	GUH323	.35	1	GUH03	.12	¾	GUH32	.23
1	1	GUH333	.35	1	GUH03	.12	1	GUH 3	.23

Threaded Covers, Canopies, and Adapters

For Condulets of the GUA and GUF Series

Surface Covers

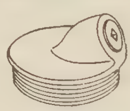


Diam. Cover Opening	Cat. No.	Each
2	GUA04	$.65
3	GUA06	.75
3⅝	GUA07	1.10
5	GUA09	3.35

Flush Covers

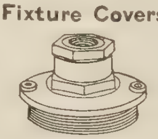
Diam. Cover Opening	Cat. No.	Each
2	GUA049	$.65
3	GUA069	.75
3⅝	GUA079	1.10
5	GUA099	3.35

Sealing Covers



2	GUA041	$.80
3	GUA062	1.00
3⅝	GUA072	1.30
5	GUA092	3.75

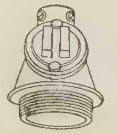
Fixture Covers



3	GUA0682	$3.90

(¾-Inch Stem)

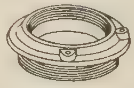
Fixture Canopies



Size fixture stem: No. GUA-068, ¾ in.; No. GUA098, 1¼ in.

3	GUA068	$3.50
5	GUA098	6.10

Adapters

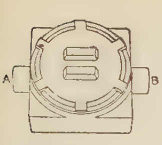


Takes canopies, fixtures, etc., designed for 3-in. cover openings, on GU, GUA, GUE, or GUP series condulets with 3⅝-in. cover openings.

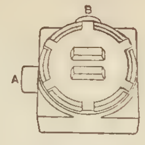
3⅝	GUA0760	$1.55

Types GU and GUE Explosion-Proof Junction Condulets

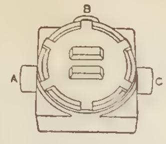
Schedule CE



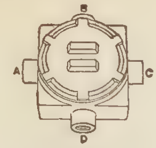
Types GU1
and GUE1



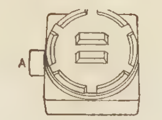
Types GU2
and GUE2



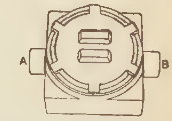
Types GU3
and GUE3



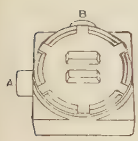
Types GU4
and GUE4



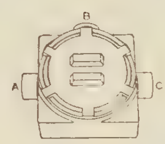
Types GU5
and GUE5
(Has Back Hub J)



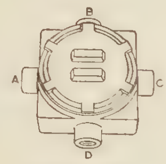
Types GU6
and GUE6
(Has Back Hub J)



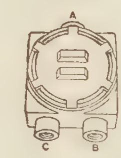
Types GU7
and GUE7
(Has Back Hub J)



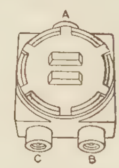
Types GU8
and GUE8
(Has Back Hub J)



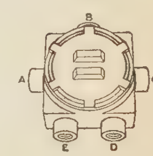
Types GU9
and GUE9
(Has Back Hub J)



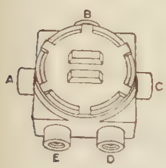
Types GU10
and GUE10



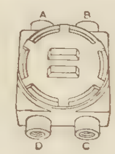
Types GU11
and GUE11
(Has Back Hub J)



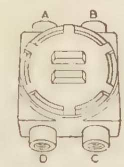
Types GU12
and GUE12



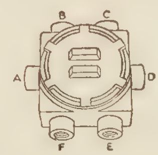
Types GU13
and GUE13
(Has Back Hub J)



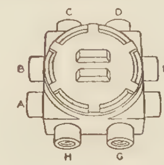
Types GU14
and GUE14



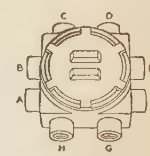
Types GU15
and GUE15
(Has Back Hub J)



Types GU16
and GUE16
(Has Back Hub J)



Types GU17
and GUE17



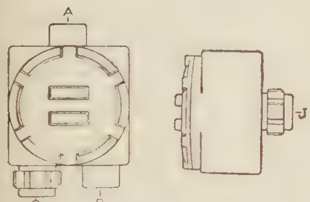
Types GU18
and GUE18
(Has Back Hub J)

The Types GU and GUE Condulets provide explosion-proof utility junction boxes with welded hubs to meet requirements for special hub combinations. The body is blind tapped to take CB connection block.

The catalogue numbers and prices are arrived at in the following manner: Refer to the illustrations above and select the particular type of Condulet desired. Use this type as the first portion of the catalogue number. The catalogue number is completed by using the symbols* shown below in the schedule of threaded and union hubs, to indicate the size and type of each hub in rotation as lettered on the illustration.

Any hub may be omitted by using a zero (0) in the proper position in the catalogue number.

Example



See illustration at the left. A is to be ¾-inch threaded hub; B, 1-inch threaded hub; C, ¾-inch union hub; and J, ¾-inch union hub in center of back.

The catalogue number will be GU11-23PP.

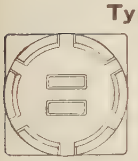
The price is determined in the following manner:

Type GU Body and Cover without Hubs	**$2.00**
A Hub, ¾-Inch Threaded, Symbol 2*	.65
B Hub, 1-Inch Threaded, Symbol 3*	.75
C Hub, ¾-Inch Union, Symbol P*	1.00
J Hub, ¾-Inch Union, Symbol P*	1.00
Total Price of Unit	**$5.40**

*Symbol numbers are given in schedule of threaded and union hubs below.

Type GUE catalogue numbers are made up in the same manner. Hub arrangements and type numbers are same as in Type GU.

Types GU and GUE without Hubs



Furnished with screw cover. Take threaded or union hubs.

Type GU

Dimensions over all: 4⅛ in. square; 2$\frac{7}{16}$ in. deep; 3⅝ in. diameter of cover opening.

Body and Cover without Hubs . . each **$2.00**

Type GUE

Dimensions over all: 4⅝ in. square; 3⅝ in. deep; 3⅝ in. diameter of cover opening.

Body and Cover without Hubs . . . . each **$2.00**

Threaded and Union Hubs

For Types GU and GUE Condulets

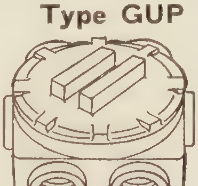
Type GU takes ½ to 1-inch hubs.

Type GUE takes ½ to 2-inch hubs† .

†Maximum size of hubs: Rear hub, 1¼ inches; 2 hubs on each side, 1½ inches threaded, 1¼-inch union.

Threaded			Union		
Size	Symbol	Each	Size	Symbol	Each
½	1	$.60	½	N	$1.00
¾	2	.65	¾	P	1.00
1	3	.75	1	Q	1.20
1¼	4	.90	1¼	R	1.75
1½	5	1.15	1½	S	3.00
2	6	1.50	2	T	4.00

Type GUP Explosion-Proof Condulets



Type GUP Condulets are especially suitable for gasoline pump installations that are to be rewired to comply with the new inspection requirements for hazardous locations, where frequently an explosion-proof junction Condulet will be required to replace a steel knockout box. Hubs tapped for ¾-inch conduit. Cover opening diameter, 3⅝ inches.

With 6 Hubs

2 in top; 1 in each side; 2 in bottom; none in back.

No. GUP215 . . . . each **$2.70**

With 10 Hubs

2 in top; 1 in each side; 2 in bottom; 4 in back.

No. GUP214 . . . . each **$2.90**

Outside dimensions of body exclusive of hubs: Length 4⅛ in.; width 4⅛ in.; depth 2½ in.

Connection Blocks

For Types GU and GUE Condulets

Style, 4-wire. Rating—20 amps., 125 volts.

No. CB1124 . . . . each **$.90**

EV Series Explosion-Proof Lighting Fixture Condulets

Schedule CE

40-watt is furnished with globe EV4 and guard EV084, and takes 25 or 40-watt Type A lamps, 50-watt Type P19 mill type lamps, or any medium base lamp not exceeding 2⅜x4¼ inches.

100-watt is furnished with globe EV10 and guard EV081, and takes 50, 60, 75, or 100-watt lamps, or any medium base lamp not exceeding 2⅞x6$\frac{1}{16}$ inches.

200-watt is furnished with globe EV20 and guard EV082, and takes 150 or 200-watt lamps, or any medium base lamp not exceeding 3¾x8⅛ inches.

Type EVA—Pendent Type

40-Watt

Catalogue Number EVA149
Each **$12.00**
Size .... inch ½

100-Watt

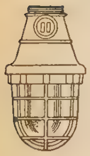
Catalogue Number EVA219
Each **$18.00**
Size .... inch ¾

200-Watt

Catalogue Number EVA229
Each **$26.00**
Size .... inch ¾

Type EV—Ceiling Type

For Condulets of the GUA and GUF Series with 3-Inch Cover Openings*



40-Watt

Catalogue Number EV349
Each **$14.00**

100-Watt

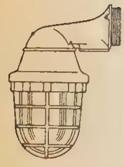
Catalogue Number EV319
Each **$20.00**

200-Watt

Catalogue Number EV329
Each **$28.00**

Type EV—Bracket Type

For Condulets of the GUA and GUF Series with 3-Inch Cover Openings*



40-Watt

Catalogue Number EV449
Each **$16.00**

100-Watt

Catalogue Number EV419
Each **$22.00**

200-Watt

Catalogue Number EV429
Each **$30.00**

Accessories and Parts

For Types EV and EVA

Clear Globes

40-watt globe is furnished with threaded ring. 100 and 200-watt globes are furnished with aluminum gaskets.

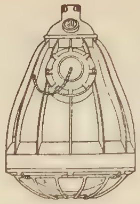
40-Watt Cat. No.	Each	100-Watt Cat. No.	Each	200-Watt Cat. No.	Each
EV4	**$4.00**	EV10	**$5.00**	EV20	**$9.00**
Cast Aluminum Guards					
EV084	**$1.50**	EV081	**$2.00**	EV082	**$3.00**
Reflectors — RLM					
EV411	**$2.50**	EV111	**$3.00**	EV211	**$4.00**
Deep Bowl					
EV412	**$2.50**	EV112	**$3.00**	EV212	**$4.00**
Shallow Bowl					
EV413	**$2.25**	EV113	**$2.75**	EV213	**$3.75**
30° Angle					
EV414	**$2.50**	EV114	**$3.00**	EV214	**$4.00**

Finish.— Condulet, cadmium-galvanized; guard, hood, and screw cover, aluminum; reflector, green porcelain enamel outside, white porcelain enamel inside.

*Can also be mounted on Condulets of the GU, GUA, GUE, and GUP series with 3⅝-inch cover opening when used with adapter No. GUA0760.

Type EVA Explosion-Proof Lighting Fixture Condulets

Schedule CE



Furnished with reflector, mounted inside unit, and a bowl-shaped lens instead of a globe. Has threaded cover opening in housing for relamping. Lens mounted in metal ring; in case of breakage, entire lens assembly has to be replaced. No. EVA4539 may be mounted in any position; EVA4549, vertically or not more than 45° from vertical position; EVA459, vertically or not more than 15° from vertical position.

Furnished with lens EV50 and guard EV085, and takes 300, 400, or 500-watt lamps, or any mogul base lamp not exceeding 5x9$\frac{13}{16}$ inches.

Cat. No.	EVA4539	EVA4549	EVA459
Each	**$110.00**	**110.00**	**110.00**
Maximum Lamp ... watts	300	400	500
Size ... inches	1¼	1¼	1¼

Flexible Coupling For Type EVA Condulets

Permits fixture to assume a vertical position by gravity.

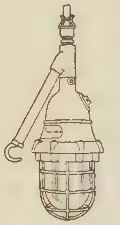
No. ECF44 .... each **$9.50**

Type EVH Explosion-Proof Hand Lamps

Has moulded rubber handle which provides a comfortable grip. A third terminal is provided for connection to a third wire in the cord for grounding all non-current-carrying metal parts. Furnished with globe EV4 and guard EVH084, and takes 25 or 40-watt Type A, or 50-watt Type P-19 mill type lamps, or any medium base lamp not exceeding 2⅜x4¼ inches.

No.	Description	Each
EVH40	.250 to .625 Diam. Cable	**$14.50**
Clear Globes		
EV4	With Threaded Ring	**$4.00**
Guards		
EVH084	Cast Aluminum	**$1.75**

Type EVS Explosion-Proof Portable Lamps



Same construction as 100 and 200-Watt Type EVA with a handle assembly added, which includes hook and cable clamp. A third wire is provided for connection to a third wire in cord for grounding.

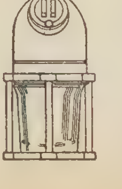
100-watt is furnished with globe EV10 and guard EV081, and takes 50, 60, 75 or 100-watt lamps, or any medium base lamp not exceeding 2⅞x6$\frac{1}{16}$ inches.

200-watt is furnished with globe EV20 and guard EV082, and takes 150 or 200-watt lamps, or any medium base lamp not exceeding 3¾x8⅛ inches.

Diameter of cable, .250 to .625.

100-Watt No.	Each	200-Watt No.	Each
EVS30	**$21.50**	EVS20	**$29.50**
Clear Globes with Aluminum Gaskets			
EV10	**$5.00**	EV20	**$9.00**
Cast Aluminum Guards			
EV081	**$2.00**	EV082	**$3.00**

Type EVA Explosion-Proof Pilot and Sign Light Fixture Condulets



Furnished with guard and globe assembly EV39; takes 10-watt Type S-14 lamps. Aluminum gaskets. Size ½ inch.

No. EVA139 .... each **$10.00**

Guard and Clear Globe Assembly

No. EV39 .... each **$5.50**

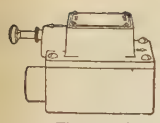
Type EVNA Sign Attachments

Plain front glass backed by opal glass on which not more than 5 figures or letters can be placed. Characters furnished at 30 cents each.

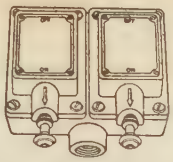
No. EVNA03 .... each **$4.00**

FS Series Explosion-Proof Tumbler Switch Condulets

Schedule CE



Type FS



Type FS 2-Gang

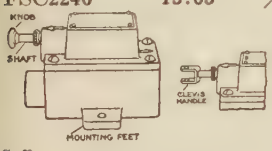
Suitable for control of lighting, appliance and small motor circuits, or for push button remote control of magnetically operated motor controllers.

Furnished complete with tumbler switch.

Standard finish, cadmium-galvanized.

Outside dimensions exclusive of hubs: Types FS, FSC, and FSDC—Length 4 5/8 in.; width 3 in.; depth 3 13/16 in. Types FS and FSC, 2-gang–Length 4 5/8 in.; width 6 3/16 in.; depth 3 13/16 in.

Cat. No.	Each	Size In.	Style	Ratings 125 V.	Ratings 250 V.	H.P.
Type FS						
FS2129	$5.50	3/4	1 Pole	20	10	...
FS218	5.60	3/4	2 Pole	20	20	2
FS2123	8.60	3/4	3 Pole	10	10	1/4
FS2130	5.90	3/4	3 Way	20	10	...
FS2140	8.80	3/4	4 Way	10	5	...
Type FSC						
FSC2129	$5.65	3/4	1 Pole	20	10	...
FSC218	5.75	3/4	2 Pole	20	20	2
FSC2123	8.75	3/4	3 Pole	10	10	1/4
FSC2130	6.05	3/4	3 Way	20	10	...
FSC2140	8.95	3/4	4 Way	10	5	...
Type FSDC						
FSDC2129	$5.65	3/4	1 Pole	20	10	...
FSDC218	5.75	3/4	2 Pole	20	20	2
FSDC2123	8.75	3/4	3 Pole	10	10	1/4
FSDC2130	6.05	3/4	3 Way	20	10	...
FSDC2140	8.95	3/4	4 Way	10	5	...
Type FS 2-Gang						
FS2229	$8.15	3/4	1 Pole	20	10	...
FS228	8.30	3/4	2 Pole	20	20	2
FS2223	14.30	3/4	3 Pole	10	10	1/4
FS2230	9.00	3/4	3 Way	20	10	...
FS2240	14.90	3/4	4 Way	10	5	...
Type FSC 2-Gang						
FSC2229	$8.30	3/4	1 Pole	20	10	...
FSC228	8.45	3/4	2 Pole	20	20	2
FSC2223	14.45	3/4	3 Pole	10	10	1/4
FSC2230	9.15	3/4	3 Way	20	10	...
FSC2240	15.05	3/4	4 Way	10	5	...

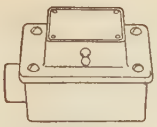


Condulets listed above can be furnished with special handles and mounting feet. Catalogue number should be followed by a suffix as described below.

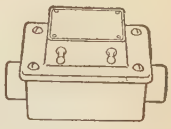
Suffix No.	Description	Extra Each
S43	Standard Shaft with Clevis Handle	None
S21	Shaft 1 In. Longer than Standard with Removable Knob	$.30
S27B	Standard Shaft and Knob (not Removable) with Mounting Feet Welded to Body	.80
S27C	Standard Shaft and Removable Knob with Mounting Feet Welded to Body	.80
S27A	Shaft 1/2 In. Longer than Standard with Removable Knob, Mounting Feet Welded to Body	1.10
S27	Shaft 1 In. Longer than Standard with Removable Knob, Mounting Feet Welded to Body.	1.10
S27D	Standard Shaft, Removable Composition Knob, Mounting Feet Welded to Body	1.15

FS Series Explosion-Proof Tumbler Switch Condulets

Schedule CE



Type FS Single



Type FSC Duplex

Furnished complete with tumbler switch.

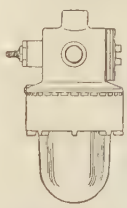
Standard finish, cadmium-galvanized.

Outside dimensions exclusive of hubs: Length 5 1/8 in.; width 3 1/2 in.; depth 3 1/2 in.

Cast Feraloy Cover Cat. No.	Each	Cast Brass Cover Chromium-Plated Cat. No.	Each	Size In.	Style	Ratings 125 V.	Ratings 250V.
Type FS Single							
FS2101	$5.50	FS2121	$9.75	3/4	1 Pole	10	5
FS2100	5.60	FS2120	9.85	3/4	2 Pole	10	10
FS2107	5.90	FS2119	10.15	3/4	3 Way	10	5
FS2108	8.80	FS2124	13.05	3/4	4 Way	5	2
Type FSC Single							
FSC2101	$5.65	FSC2121	$9.90	3/4	1 Pole	10	5
FSC2100	5.75	FSC2120	10.00	3/4	2 Pole	10	10
FSC2107	6.05	FSC2119	10.30	3/4	3 Way	10	5
FSC2108	8.95	FSC2124	13.20	3/4	4 Way	5	2
Type FS Duplex							
FS2109	$7.00	FS2125	$11.25	3/4	1 Pole	10	5
FS2110	7.80	FS2126	12.05	3/4	2 Pole	10	10
FS2113	7.90	FS2127	12.15	3/4	3 Way	10	5
FS2114	15.30	FS2128	19.55	3/4	4 Way	5	2
Type FSC Duplex							
FSC2109	$7.15	FSC2125	$11.40	3/4	1 Pole	10	5
FSC2110	7.95	FSC2126	12.20	3/4	2 Pole	10	10
FSC2113	8.05	FSC2127	12.30	3/4	3 Way	10	5
FSC2114	15.45	FSC2128	19.70	3/4	4 Way	5	2
Type FS Triple							
FS2115	$8.50	FS2131	$12.75	3/4	1 Pole	10	5
FS2116	9.10	FS2132	13.35	3/4	2 Pole	10	10
FS2117	9.75	FS2133	14.00	3/4	3 Way	10	5
FS2118	22.00	FS2134	26.25	3/4	4 Way	5	2
Type FSC Triple							
FSC2115	$8.65	FSC2131	$12.90	3/4	1 Pole	10	5
FSC2116	9.25	FSC2132	13.50	3/4	2 Pole	10	10
FSC2117	9.90	FSC2133	14.15	3/4	3 Way	10	5
FSC2118	22.15	FSC2134	26.40	3/4	4 Way	5	2

Type EVG Explosion-Proof Lighting Fixture Condulets

For Gasoline Pump and Pump Dial Illumination



Type EVG Condulet is provided with a special Condulet body having a small oscillating switch type SWH; a wiring compartment with sufficient room for making the taps and splices; and a hub arrangement particularly suited to the requirements of gasoline pump wiring.

Intended for mounting within the pump housing where its globe is not subject to breakage.

When used for indirect illumination of the pump dial, the fixture should be installed with the globe in horizontal position or in a vertical position with the base of the lamp down, so the globe may be removed easily.

Dimensions over all, exclusive of hub: Length 8 5/8 in.; width 5 1/2 in. Size 1/2 inch.

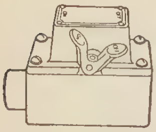
Furnished with switch SWH13 and globe EV4. Takes 25 or 40-watt Type A lamps, 50-watt Type P19 mill type lamps, or any medium base lamp not exceeding 2 3/8x4 1/4 inches.

No. EVG2 Condulet.....each $10.00

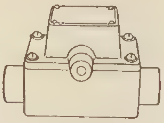
No. EV4 Clear Globe with Threaded Ring.....each 4.00

FS Series Explosion-Proof Push Button Switch Condulets

Schedule CE



Type FS
Rocker Type



Type FSC
Key Operation

Furnished complete with double push button switch.

Standard finish, cadmium-galvanized.

Outside dimensions exclusive of hubs; Types FS and FSC—Length 4⅝ in.; width 3 in.; depth 3$^{13}/_{16}$ in. Types FS and FSC 2-Gang—Length 4⅝ in.; width 6$^{3}/_{16}$ in.; depth 3$^{13}/_{16}$ in.

With Rocker Type Operating Handle

Type FS

Cat. No.	Each	Size In.	Style	Ratings 125 V.	Ratings 250 V.	Ratings H.P.
FS2138	$5.50	¾	1 Pole	20	10	..
FS214	5.60	¾	2 Pole	20	20	2
FS2139	5.90	¾	3 Way	20	10	..
FS2145	8.80	¾	4 Way	5	2	..

Type FSC

Cat. No.	Each	Size In.	Style	125 V.	250 V.	H.P.
FSC2138	$5.65	¾	1 Pole	20	10	..
FSC214	5.75	¾	2 Pole	20	20	2
FSC2139	6.05	¾	3 Way	20	10	..
FSC2145	8.95	¾	4 Way	5	2	..

Type FS 2-Gang

Cat. No.	Each	Size In.	Style	125 V.	250 V.	H.P.
FS2238	$8.15	¾	1 Pole	20	10	..
FS2204	8.30	¾	2 Pole	20	20	2
FS2239	9.00	¾	3 Way	20	10	..
FS2245	14.90	¾	4 Way	5	2	..

Type FSC 2-Gang

Cat. No.	Each	Size In.	Style	125 V.	250 V.	H.P.
FSC2238	$8.30	¾	1 Pole	20	10	..
FSC2204	8.45	¾	2 Pole	20	20	2
FSC2239	9.15	¾	3 Way	20	10	..
FSC2245	15.05	¾	4 Way	5	2	..

For Key Operation, ⅝-Inch Key

Key furnished at 15 cents each.

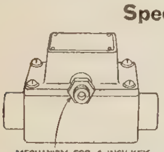
Type FS

Cat. No.	Each	Size In.	Style	125 V.	250 V.	H.P.
FS2135	$5.50	¾	1 Pole	20	10	..
FS2106	5.60	¾	2 Pole	20	20	2
FS2136	5.90	¾	3 Way	20	10	..
FS2137	8.80	¾	4 Way	5	2	..

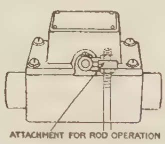
Type FSC

Cat. No.	Each	Size In.	Style	125 V.	250 V.	H.P.
FSC2135	$5.65	¾	1 Pole	20	10	..
FSC2106	5.75	¾	2 Pole	20	20	2
FSC2136	6.05	¾	3 Way	20	10	..
FSC2137	8.95	¾	4 Way	5	2	..

Special Mechanisms



MECHANISM FOR 4-INCH KEY



ATTACHMENT FOR ROD OPERATION

Switch Condulets of the FS Series listed above can be furnished with various special mechanisms. For such arrangements the catalogue number should be followed by a suffix as described below. Example: FS2106-S32.

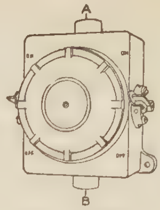
There is no extra charge for these mechanisms.

Suffix No.	Description	
S-32	Key Operation, 4-Inch Key*	No Extra Charge
S-33	Attachment for Rod Operation	No Extra Charge

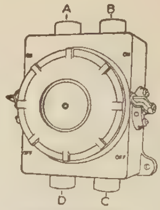
*Furnished with nut for clamping against inner casing and 4-inch key for operation through outer casing of a pump housing. Can be applied to Condulet for key operation only.

Type GUB Explosion-Proof Panelboard Condulets

Schedule CE



Type GUB1



Type GUB14

The Type GUB Condulet is used as a 2-circuit, 3 to 2 or 2 to 2-wire convertible panel, on 125-volt, 2-wire, or 125-250-volt, 3-wire, systems with grounded neutral, each circuit having single-pole protection. The 3-wire or 2-wire feeder may extend through, if wire size is not reduced.

The terminal board has a neutral bar or strip with main lugs at each end and a wire-binding screw for the neutral conductor of each circuit; also 2 terminals with lugs, one terminal for each outside conductor.

If furnished without breakers, circuit breaker ratings must be stamped in name plate when breakers are installed.

Outside dimensions, exclusive of hubs; Length 10 in.; width 8 in.; depth 5½ in.; diameter of cover opening 7 in. Standard finish, cadmium-galvanized.

Furnished with terminal board* and with or without two 125-volt, single-pole Flipon circuit breakers.

Threaded for Rigid Conduit

Type GUB1

Size: A-¾, B-¾

Ampere Rating	With Circuit Breakers Cat. No.	Each	Without Circuit Breakers Cat. No.	Each
15	GUB109-22-15	$48.50	GUB109-22-B	$38.50
20	GUB109-22-20	48.50		
25	GUB109-22-25	48.50		
35	GUB109-22-35	49.50		
Size: A-1¼, B-1¼				
15	GUB109-44-15	$48.70	GUB109-44-B	$38.70
20	GUB109-44-20	48.70		
25	GUB109-44-25	48.70		
35	GUB109-44-35	49.70		

Type GUB2

Size: A-1, B-¾, C-¾

Ampere Rating	With Circuit Breakers Cat. No.	Each	Without Circuit Breakers Cat. No.	Each
15	GUB209-322-15	$49.00	GUB209-322-B	$39.00
20	GUB209-322-20	49.00		
25	GUB209-322-25	49.00		
35	GUB209-322-35	50.00		
Size: A-1½, B-1, C-1				
15	GUB209-533-15	$49.20	GUB209-533-B	$39.20
20	GUB209-533-20	49.20		
25	GUB209-533-25	49.20		
35	GUB209-533-35	50.20		

Type GUB14

Size: A-¾, B-¾, C-1, D-1

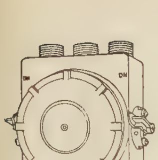
Ampere Rating	With Circuit Breakers Cat. No.	Each	Without Circuit Breakers Cat. No.	Each
15	GUB1409-2233-15	$49.50	GUB1409-2233-B	$39.50
20	GUB1409-2233-20	49.50		
25	GUB1409-2233-25	49.50		
35	GUB1409-2233-35	50.50		
Size: A-1, B-1, C-1½, D-1½				
15	GUB1409-3355-15	$49.95	GUB1409-3355-B	$39.95
20	GUB1409-3355-20	49.95		
25	GUB1409-3355-25	49.95		
35	GUB1409-3355-35	50.95		

*Grounded neutral strip: When any of the above catalogue numbers are followed by the suffix S2 the terminal board will be furnished with the neutral strip grounded to the Condulet, at no additional charge.

Type GUB Explosion-Proof Panelboard Condulets

Schedule CE

Type GUB11



Threaded for Union Hub Nuts and Sleeves

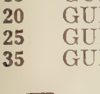
Takes the 1-inch nut and any of the sleeves listed below, or the 1-inch cap Type GUH, listed on another page.

Dimensions overall exclusive of hubs: Length 10 in.; width 8 in.; depth 5½ in.; diameter of cover opening 7 in.

Standard finish, cadmium-galvanized.

Ampere Rating	With Circuit Breaker Cat. No.	Each	Without Circuit Breaker Cat. No.	Each
15	GUB1109–LQ–15	$50.60	GUB1109–LQ–B	$40.60
20	GUB1109–LQ–20	50.60		
25	GUB1109–LQ–25	50.60		
35	GUB1109–LQ–35	51.60		

Union Hub Nuts and Sleeves



For Type GUB11 Condulets

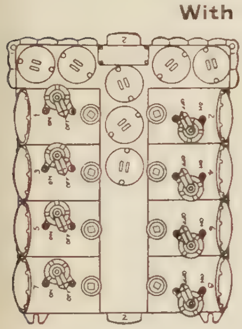
Standard finish, cadmium-galvanized.

Nuts and Sleeves: Nut In.	Sleeve In.	Cat. No.	Each	Nuts Only: Size In.	Cat. No.	Each	Sleeves Only: Size In.	Cat. No.	Each
1	½	GUH313	$.35	1	GUH03	$.12	½	GUH31	$.23
1	¾	GUH323	.35	1	GUH03	.12	¾	GUH32	.23
1	1	GUH333	.35	1	GUH03	.12	1	GUH3	.23

Type FLP Explosion-Proof Panelboards

Schedule CE

With Circuit Breakers



Type FLP Panelboard consists of a ready-wired assembly of "Flipon" circuit breakers in an explosion-proof housing. A separate compartment is provided for each breaker. Wiring connections are made to main and branch circuit terminal blocks mounted in a separate T-shaped compartment. Main terminals are furnished with main lugs only. The wire terminals are accessible through openings provided with threaded covers. Usually the panelboard is mounted so that the branch circuit hubs are at the top; it may be mounted with the circuit hubs pointing downward if it is desirable to have the branch circuits coming out of the bottom of board.

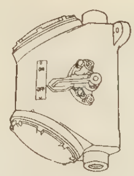
Main hubs are arranged for 2-inch conduit and are located at each end of the main terminal compartment. The ¾-inch branch circuit hubs open into the branch terminal compartment. Circuit breaker compartments are numbered from top to bottom with odd numbers on the left and even numbers on the right. Regularly furnished wired for 3 to 2 or 2 to 2-wire systems, convertible.

Dimensions overall including hubs: Length 8 circuits, 27⅛ in.; 6 circuits 23½ in.; 4 circuits 18⅜ in.; width 21¾ in. depth 6¾ in.

No. Cir.	Cap. Each Cir. Amps.	Single Pole 125 Volts D.C. or A.C. Cat. No.	Each	Double Pole 125-250 Volts D.C. or A.C. Cat. No.	Each
4	15	FLP41–15	$155.00	FLP42–15	$175.00
	20	FLP41–20	155.00	FLP42–20	175.00
	25	FLP41–25	155.00	FLP42–25	175.00
	35	FLP41–35	158.00	FLP42–35	178.00
6	15	FLP61–15	200.00	FLP62–15	240.00
	20	FLP61–20	200.00	FLP62–20	240.00
	25	FLP61–25	200.00	FLP62–25	240.00
	35	FLP61–35	205.00	FLP62–35	245.00
8	15	FLP81–15	230.00	FLP82–15	280.00
	20	FLP81–20	230.00	FLP82–20	280.00
	25	FLP81–25	230.00	FLP82–25	280.00
	35	FLP81–35	236.00	FLP82–35	286.00

Type FLS Explosion-Proof General Use Switch Condulets

Schedule CE



Type FLS are general use enclosed switches, rated in amperes, for use in hazardous locations. If used as motor switches allowance should be made for the locked rotor motor current which may be 5 or 6 times the full load motor current. The single throw, and the double throw with no "off" position, are furnished with switches of the tumbler type, positive quick make and break; therefore they cannot be held in partial contact.

The double throw and motor reversing switches with "off" position are slow make and quick break. The slow make permits proper control of handle for jogging.

These Condulets are listed with 2 hubs, through feed, both hubs for threaded conduit of the same size. Other hub arrangements can be furnished.

Standard finish, cadmium-galvanized.

Furnished with switch, not fusible.

Single Throw, Tumbler

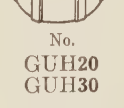
Ratings	Hub Size Through Feed	2-Pole Cat. No.	Each	3-Pole Cat. No.	Each
60A. 125V. / 30A. 250V. / 5A. 600V. D.C. / 30A. 600V. A.C.	½	FLS102-11	$22.00	FLS103-11	$30.00
	¾	FLS102-22	22.00	FLS103-22	30.00
	1	FLS102-33	22.00	FLS103-33	30.00
	1¼	FLS102-44	22.00	FLS103-44	30.00
100A. 125V. / 100A. 250V. / 15A. 600V. D.C. / 100A. 600V. A.C.	1	FLS106-33	60.00	.....	.....
	1¼	FLS106-44	60.00	FLS107-44	70.00
	1½	FLS106-55	60.00	FLS107-55	70.00
	2	.....	....	FLS107-66	70.00
200A. 125V. D.C. / 200A. 230V. A.C.	1½	FLS108-55	75.00	FLS109-55	185.00
	2	FLS108-66	75.00	FLS109-66	185.00

Double Throw, Tumbler, No "Off" Position

Ratings	Hub Size Through Feed	2-Pole Cat. No.	Each	3-Pole Cat. No.	Each
60A. 125V. / 30A. 250V. / 5A. 600V. D.C. / 30A. 600V. A.C.	½	FLS101-11	$30.00	.....	.....
	¾	FLS101-22	30.00	.....	.....
	1	FLS101-33	30.00	.....	.....
	1¼	FLS101-44	30.00	.....	.....
	Double Throw with "Off" Position				
Ratings: 115V. A.C. / 230V. A.C. / 460/575V. A.C.	½	FLS112-11	$36.00	FLS113-11	$38.00
2-Pole 1-Phase: 20A. 1½HP / 20A. 3HP / 20A. 5HP	¾	FLS112-22	36.00	FLS113-22	38.00
3-Pole 2 or 3 Ph.: 20A. 2HP / 20A. 5HP / 20A. 5HP	1	FLS112-33	36.00	FLS113-33	38.00
	Motor Reversing with "Off" Position				
	½	FLS110-11	$38.00	FLS111-11	$40.00
	¾	FLS110-22	38.00	FLS111-22	40.00
	1	FLS110-33	38.00	FLS111-33	40.00

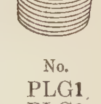
Type GUH Threaded Blank Caps

For GUA Series without Sleeves and Nuts, and Type GUB11 Condulets



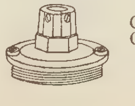
Size	No.	Each
¾	GUH20	$.15
1	GUH30	.20

Type PLG Pipe Plugs



Size	No.	Each
½	PLG1	$.06
¾	PLG2	.08
1	PLG3	.10

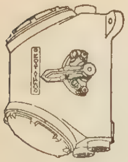
Nipple Covers for GUA and GUF Series



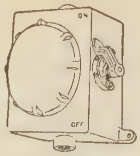
Diameter Cond. Cover Opening, In.	Cat. No.	Each	Stem In.
2	GUA0471	$1.20	½
3	GUA0671	1.55	½

Types FLF and GUB Explosion-Proof Motor Starting Switch Condulets

Schedule CE



Type FLF



Type GUB

Types FLF and GUB Condulets are designed as explosion proof housings with operating handles or push buttons for external operation of certain definite motor starting switch mechanisms as indicated in the listings. Holes are provided for a padlock so that the operating handle can be locked "off" or "on." The switches are trip-free from the handle; therefore, locking the handle "on" does not prevent tripping but the switch cannot then be reset without removing the padlock. Switches are "across-the-line" starting type with thermal overload trip.

Heaters for the thermal overload trip units should be selected in accordance with the name plate current rating of the motor to be protected. If the name plate current rating is not known, it can be approximated from tables published in Article 8 of the N. E. Code. However, for proper protection to the motor, the heater should be selected in accordance with the actual motor name plate rating. If switch is located in a cool place and the motor in a hot place, the heater rating should be smaller than normal.

The heating elements are renewable and can be changed to suit the current rating of the particular motor that is to be protected. Only 2 heaters are used one in each of the outer poles of the switch. Therefore, if used on 2-phase 3-wire circuits, the common wire should be connected to the center pole. All switches are top connected; line at top, load at bottom.

These Condulets are listed for threaded hub arrangements. Other hub arrangements can be furnished.

Standard finish, cadmium-galvanized.

With Switch and 2 Heaters Cat. No.	Each	Without Switch Cat. No.	Each	Hub Arrangement
G-E Switch CR1062-B2				
FLF104–22*	Prices on Application	FLF104–22-B	$20.00	One 3/4" at Top; One 3/4" at Bottom
FLF204–244*		FLF204–244-B	20.00	One 3/4" at Top; Two 1 1/4" at Bottom
FLF304–22*		FLF304–22-B	20.00	Two 3/4" at Bottom
G-E Switch CR1062-C2				
GUB105–22*		GUB105–22-B	30.00	One 3/4" at Top; One 3/4" at Bottom
GUB205–244*		GUB205–244-B	30.00	One 3/4" at Top; Two 1 1/4" at Bottom
GUB305–22*		GUB305–22-B	30.00	Two 3/4" at Bottom
Trumbull Switch TM2				
FLF196–22*		FLF196–22-B	20.00	One 3/4" at Top; One 3/4" at Bottom
FLF296–244*		FLF296–244-B	20.00	One 3/4" at Top; Two 1 1/4" at Bottom
FLF396–22*		FLF396–22-B	20.00	Two 3/4" at Bottom
Trumbull Switch TM7 1/2				
GUB107–22*		GUB107–22-B	30.00	One 3/4" at Top; One 3/4" at Bottom
GUB207–244*		GUB207–244-B	30.00	One 3/4" at Top; Two 1 1/4" at Bottom
GUB307–22*		GUB307–22-B	30.00	Two 3/4" at Bottom

*Catalogue number includes 2 heaters which must be specified. Select heaters required and add Crouse-Hinds symbol number of heater as a suffix to the catalogue number of complete condulet. Example: The catalogue number of FLF104–22, when furnished with two 1.1-ampere heaters, would be FLF104–22–114. Symbol number 0 (zero) may be used to indicate heaters omitted, to be ordered and installed later.

Heater Units for Motor Starting Switches

Schedule CE

For Use in Types FLF and GUB Condulets

General Electric*

Tested for Group Fusing*

Full Load Current Rating of Motor	Ampere Rating of Heater	Crouse-Hinds Symbol No. of Heater	Full Load Current Rating of Motor	Ampere Rating of Heater	Crouse-Hinds Symbol No. of Heater
.36 to .40	.45	107	2.63 to 2.98	3.28	124
.41 to .46	.51	108	2.99 to 3.36	3.70	125
.47 to .52	.58	109	3.37 to 3.64	4.0	126
.53 to .60	.66	110	3.65 to 4.18	4.6	127
.61 to .68	.75	111	4.19 to 4.63	5.1	128
.69 to .77	.85	112	4.64 to 5.27	5.8	129
.78 to .88	.97	113	5.28 to 6.09	6.7	130
.89 to 1.03	1.10	114	6.10 to 6.73	7.4	131
1.04 to 1.14	1.25	115	6.74 to 7.82	8.6	132
1.15 to 1.27	1.40	116	7.83 to 8.54	9.4	133
1.28 to 1.45	1.60	117	8.55 to 9.55	10.5	134
1.46 to 1.61	1.77	118	9.56 to 10.7	11.8	135
1.62 to 1.82	2.00	119	10.8 to 12.4	13.6	136
1.83 to 1.96	2.15	120	12.5 to 14.0	15.4	137
1.97 to 2.16	2.37	121	14.1 to 15.8	17.4	138
2.17 to 2.42	2.57	122	15.9 to 18.2	20.0	139
2.43 to 2.64	2.90	123	....	....	...

Trumbull

.30 to .45	1/2	51	4.55 to 5.45	6	62
.46 to .68	3/4	52	5.46 to 6.36	7	63
.69 to .90	1	53	6.37 to 7.26	8	64
.91 to 1.35	1 1/2	54	7.27 to 8.18	9	65
1.36 to 1.80	2	55	8.19 to 9.09	10	66
1.81 to 2.27	2 1/2	56	9.10 to 10.9	12	67
2.28 to 2.72	3	57	11.0 to 12.7	14	68
2.73 to 3.18	3 1/2	58	12.8 to 14.5	16	69
3.19 to 3.63	4	59	14.6 to 16.3	18	70
3.64 to 4.08	4 1/2	60	16.4 to 18.1	20	71
4.09 to 4.54	5	61	....	..	..

Tested for Group Fusing*

.30 to .45	1/2	81	2.73 to 3.18	3 1/2	88
.46 to .68	3/4	82	3.19 to 3.63	4	89
.69 to .90	1	83	3.64 to 4.08	4 1/2	90
.91 to 1.35	1 1/2	84	4.09 to 4.54	5	91
1.36 to 1.80	2	85	4.55 to 5.45	6	92
1.81 to 2.27	2 1/2	86	5.46 to 6.36	7	93
2.28 to 2.72	3	87	....	.	...

Feeder Protection for Heater Units

Tested for Group Fusing*

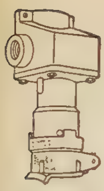
General Electric Ampere Rating of Heater	Maximum Feeder Protection at 250 Volts	Maximum Feeder Protection at 600 Volts	Trumbull Ampere Rating of Heater	Maximum Feeder Protection at 250 Volts	Maximum Feeder Protection at 600 Volts
.45 to 3.70	60	30			
4.0	100	30	1/2 to 4 1/2	100	60
4.6 to 13.6	100	60	5 to 7	100	100
15.4 to 20.0	100	100			

*Tested For Group Fusing Two Or More Motors On One Feeder.—Under certain conditions laid down in rule 808b2, exception 1, of the National Electrical Code, individual branch circuit fuses for each motor may be omitted and two or more motors each with its individual running protective device may be grouped on one feeder, in which case the maximum size of the fuses must not exceed the smallest maximum fuse protection specified in connection with any of the motor running protective devices for that group.

Many running protective devices have been subjected to short-circuit tests to determine the maximum rating of feeder fuses which may be used and still prevent the motor protective device from becoming a fire hazard on short circuit. These figures are usually marked on such devices, also published where such devices are listed.

Delayed Action Explosion-Proof Arktite Plugs and Receptacles

Schedule CE



Type CES Receptacle

Designed to provide a greater degree of safety in hazardous locations. The purpose of the delayed action is to permit the arc to be broken and the resulting flame, sparks, and hot metal parts to cool below the ignition temperature before the arcing chambers are opened to the atmosphere. An interference on the rotating sleeve prevents complete withdrawal of the plug but it can be withdrawn far enough to interrupt the circuit; and as is the case in all Arktite plugs and receptacles, the resulting arc is broken in the arcing chamber. The plug having been withdrawn as far as possible, the sleeve must be rotated to the new position before the plug can be completely withdrawn.

The delayed action Arktite plug and receptacle takes the place of an interlocked plug and explosion-proof switch. The delayed action Arktite however has this advantage. If the cord or cable is broken through undue strain, the plug will have been withdrawn far enough to break the circuit in the receptacle and the cord is dead at the point where the break occurs.

Type CES Receptacle Equipment Complete

Includes Condulet, Receptacle, and Receptacle Housing

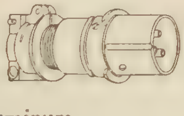
Condulets have 3 hubs, 2 of which are furnished with pipe plugs. Standard finish, cadmium-galvanized.

Style 2—Grounded through Shell and Extra Pole

Cat. No.	Each	Size Cond. Hubs In.	Circuit	Phases	Max. H.P.	Max. Amps.	Volts at 60 Cyc. A.C.
CES2213	$23.50	¾	2-Wire 3-Pole	1	½	7	460
					1½	30	230
CES2214	25.00	¾	3-Wire 4-Pole	3	1	7	460
					3	30	230
CES4233	29.50	1¼	2-Wire 3-Pole	1	3	30	460
						60	230
CES4234	33.00	1¼	3-Wire 4-Pole	3	5	30	460
						60	230

Type CPH Plugs

With Cable Grip and Rubber Bushing



Standard finish, aluminum.

Cat. No.	Each	Circuit	Phases	H.P.	Amps.	Volts	Diam. Cable
CPH7513	$11.00						.500– .625
CPH7613	11.00	2-Wire	1	½	7	460	.625– .750
CPH7713	11.00	3-Pole		1½	30	230	.750– .875
CPH7514	11.75						.500– .625
CPH7614	11.75	3-Wire	3	1	7	460	.625– .750
CPH7714	11.75	4-Pole		3	30	230	.750– .875
CPH7533	13.00						.500– .625
CPH7633	13.00	2-Wire			30	460	.625– .750
CPH7733	13.00	3-Pole	1	3	60	230	.750– .875
CPH7833	13.00						.875–1.000
CPH7933	13.00						1.000–1.188
CPH7534	14.00						.500– .625
CPH7634	14.00	3-Wire			30	460	.625– .750
CPH7734	14.00	4-Pole	3	5	60	230	.750– .875
CPH7834	14.00						.875–1.000
CPH7934	14.00						1.000–1.188

Type ECM Explosion-Proof Adjustable Conduit Couplings

1-Inch Adjustment

Size In.	Cat. No.	Each	*Dimens. In. Length	Diam.
½	ECM11	$5.00	4⅜-5⅜	1½
¾	ECM21	5.50	4⅜-5⅜	1½

Type EYS Sealing Condulets for Hazardous Locations

Schedule CE

In hazardous locations, Class I, the conduit system should be sectionalized by sealing at frequent intervals.

Type EYS is a small, compact sealing Condulet for use in vertical runs of conduit. Taps or splices within the fitting are not permissible, and it is not recommended where there are more than 3 or 4 wires in the conduit. Condulets of the GUA series with sealing cover are more convenient for use in horizontal runs, or where there are 4 or more wires in the conduit, or where it is thought likely that changes may beoome necessary in the wiring. The cover makes it less difficult to remove the sealing compound.

Condulets are furnished with pipe plug.

Standard finish, cadmium-galvanized.

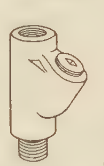
With Female Hub Top and Bottom

Size In.	Cat. No.	Each	Dimensions of Body Inches Length	Width
½	EYS1	$.65	3⁹⁄₃₂	2¼
¾	EYS2	.80	3¹¹⁄₁₆	2²¹⁄₃₂
1	EYS3	1.05	4⁵⁄₁₆	3⁵⁄₃₂
1¼	EYS4	1.30	5¹⁄₁₆	3³¹⁄₃₂
1½	EYS5	1.95	5½	4¹⁷⁄₃₂
2	EYS6	2.55	6¼	5¹⁷⁄₃₂
2½	EYS7	4.00	7⁷⁄₁₆	6¹⁵⁄₃₂
3	EYS8	5.00	8½	7⅞

With Male Hub Top and Female Hub Bottom

Size In.	Cat. No.	Each	Length	Width
½	EYS16	$.65	3²⁷⁄₃₂	2¼
¾	EYS26	.80	4⅜	2²¹⁄₃₂
1	EYS36	1.05	5¹⁄₁₆	3⁵⁄₃₂
1¼	EYS46	1.30	5⅞	3³¹⁄₃₂
1½	EYS56	1.95	6⅜	4¹⁷⁄₃₂
2	EYS66	2.55	7⅛	5¹⁷⁄₃₂
2½	EYS76	4.00	8⁷⁄₁₆	6¹⁵⁄₃₂
3	EYS86	5.00	9½	7⅞

With Female Hub Top and Male Hub Bottom

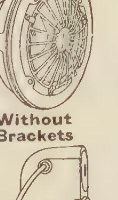


Size In.	Cat. No.	Each	Length	Width
½	EYS17	$.65	3²⁷⁄₃₂	2¼
¾	EYS27	.80	4⅜	2²¹⁄₃₂
1	EYS37	1.05	5¹⁄₁₆	3⁵⁄₃₂
1¼	EYS47	1.30	5⅞	3³¹⁄₃₂
1½	EYS57	1.95	6⅜	4¹⁷⁄₃₂
2	EYS67	2.55	7⅛	5¹⁷⁄₃₂
2½	EYS77	4.00	8⁷⁄₁₆	6¹⁵⁄₃₂
3	EYS87	5.00	9½	7⅞

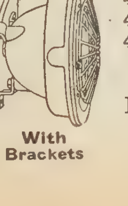
Type RCDE-8 Explosion-Proof Pit Lights

Recommended for lighting automobile greasing pits and lifts, and for general use in hazardous locations.

When installed in the concrete wall of a pit or in the floor, the unit is practically flush with the concrete, for the door projection is only ⅜ inch when used without a grid, and 1⁷⁄₁₆ inches when used with a grid. For mounting on the surface of a wall, 3 steel Z brackets are supplied.



Without Brackets



With Brackets

Without Brackets

With Glass Reflector Cat. No.	Each	With Porcelain Enameled Reflector Cat. No.	Each	Housing	Door
41704	$58.00	41702	$55.00	Feraloy	Aluminum
41705	67.00	41706	64.00	Feraloy	Brass
41707	58.00	41708	55.00	Aluminum	Aluminum
41709	82.00	41710	79.00	Brass	Brass

With 3 Z Brackets for Surface Mounting

With Glass Reflector Cat. No.	Each	With Porcelain Enameled Reflector Cat. No.	Each	Housing	Door
41711	$59.00	41712	$56.00	Feraloy	Aluminum
41713	69.00	41714	66.00	Feraloy	Brass
41715	59.00	41716	56.00	Aluminum	Aluminum
41717	83.00	41718	80.00	Brass	Brass

LAMPS.—100-watt, A23 or PS25; 150-watt. PS25; or 200 watt, PS30.

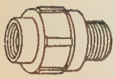
Lamps are not included in price.

Explosion-Proof Condulet Unions

Schedule CE

Type UNY

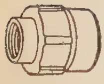
Male—For Connecting Conduit to a Condulet



Size In.	Cat. No.	Each	Dimens., In. Length	Diam.
½	UNY1M2	$.50	1 15/16	1 3/8
¾	UNY2M2	.65	2 1/16	1 5/8
1	UNY3M2	.95	2 3/16	1 15/16
1¼	UNY4M2	1.90	2 5/16	2 5/8
1½	UNY5M2	2.30	2 5/8	2 7/8
2	UNY6M2	3.65	2 13/16	3 1/2
2½	UNY7M2	5.50	3 7/8	4 5/16
3	UNY8M2	7.30	4 1/8	5

Type UNF

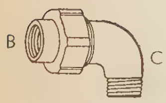
Female—For Connecting Conduit to Conduit



Size In.	Cat. No.	Each	Dimens., In. Length	Diam.
½	UNF1M2	$.50	1 3/4	1 1/2
¾	UNF2M2	.65	1 3/4	1 3/4
1	UNF3M2	.95	1 15/16	2 1/16
1¼	UNF4M2	1.90	2	2 3/4

Type UNL

90° Angle—For Connecting Conduit to a Condulet



Male end is given first.

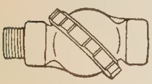
Size In.	Cat. No.	Each	Dimens. In A	B	C
¾-½	UNL21M2	$1.40	2 1/8	1 3/4	1 5/8
¾-¾	UNL2M2	1.40	2 1/8	1 3/4	1 5/8

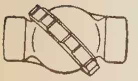
Type UNA Couplings

Type UNA is a convenient coupling or union for conduit joints made at angles from 90 to 180 degrees. A single clamping nut provides a union feature as well as easy adjustment to required angles. Not approved as conduit unions for general use.

Male—Box Connectors—Explosion-Proof

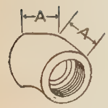
For use only if adjacent to a Condulet.

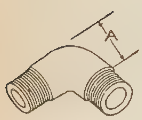


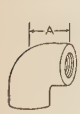


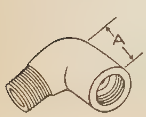
Size In.	Cat. No.	Each	Dimens. In. Length	Width
½	UNA16	$1.45	4	2 11/32
¾	UNA26	1.75	4 1/2	2 27/32
1	UNA36	2.00	5 1/4	3 15/32
Female—Universal Unions				
½	UNA1	$1.30	3 3/8	2 11/32
¾	UNA2	1.45	3 7/8	2 27/32
1	UNA3	1.75	4 5/8	3 15/32

Type EL Explosion-Proof Condulet Elbows









Size In.	Cat. No.	Each	Dimen. In.
45-Degree Female			
½	EL1	$.20	1 3/16
¾	EL2	.25	1 5/16
1	EL3	.30	1 9/16
1¼	EL4	.65	1 11/16
1½	EL5	.75	2
2	EL6	1.20	2 1/4
2½	EL7	2.70	2 3/4
3	EL8	3.15	3
3½	EL9	4.95	3 9/16
4	EL10	5.55	3 3/4
90-Degree Male			
½	EL195	$.25	1 1/2
¾	EL295	.35	1 5/8
1	EL395	.45	1 7/8
1¼	EL495	.75	2 1/8
90-Degree Female			
½	EL19	$.25	1 7/16
¾	EL29	.35	1 9/16
1	EL39	.45	1 13/16
1¼	EL49	.75	2 1/16
90-Degree Male and Female			
½	EL196	$.25	1 1/2
¾	EL296	.35	1 5/8
1	EL396	.45	1 7/8
1¼	EL496	.75	2 1/8

Grounding

The 1928 National Electrical Code requires that in industrial establishments, portable devices having exposed metal parts, such as a metal frame or casing, shall be equipped with a cord containing an additional or *safety circuit* conductor; shall be equipped with polarized attachment plug; shall have the *safety circuit* conductor connected to the frame or casing of the appliance and to the *safety circuit* contact of the plug; and shall have the *safety circuit* contact of the receptacle adequately grounded.

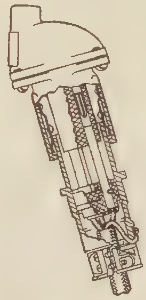
Arktite plugs and receptacles are made in two styles: Style 1 is for use under ordinary conditions, where the plug sleeve and receptacle housing may serve as part of the safety circuit; Style 2 is for use in hazardous locations, and where conditions exist favorable to corrosion, either at the receptacle or along the conduit between the receptacle and the point of grounding.

Style 1

Arktite Plug with Cable Grip and Receptacle

Mounted on Type QEE Condulet

With Plug Partially Inserted



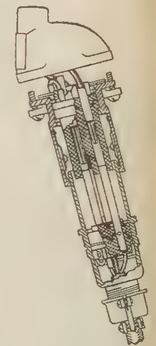
Style 1 plugs and receptacles are not provided with an extra pole for the grounding or *safety circuit* conductor, because the plug sleeve and receptacle housing serve as the grounding pole. Provision is made for connecting the *safety circuit* wire to the handle of the plug. If flexible armor is used for the *safety circuit* conductor, plugs with cable grip only should be used. The *safety circuit* is then completed from the frame or casing of the portable device through the *safety circuit* wire or flexible armor to the plug handle, thence through the natural contact of the plug handle with the plug receptacle housing to the conduit system. The contact between the plug handle and the plug receptacle housing is made more effective than it otherwise would be by the detent springs.

Style 2

Arktite Plug with Rubber Bushing and Receptacle

Mounted on Type QEE Condulet

With Plug Partially Inserted



Style 2 plugs and receptacles have an extra pole for the grounding or *safety circuit* conductor. This pole is made extra long so that contact between the plug and receptacle is made first and broken last on this *safety circuit* contact. By this means any possibility is avoided of the portable device or plug handle being momentarily alive, due to arcing on the live contacts when the circuit is broken. The *safety circuit* contact in the plug is bonded to the plug handle. That in the receptacle is bonded to the receptacle housing or Condulet.

The *safety circuit* may be completed from the frame or casing of the portable device, through the extra (*safety circuit*) wire of the cable, to the *safety circuit* contact in the plug, to the corresponding *safety circuit* contact in the receptacle; thence (1) through the conduit system, which must then be considered as a grounding conductor and be made up accordingly; or (2) through a separate copper conductor extending back to an adequate ground connection; or (3) through a separate conductor in parallel with the conduit system. The latter methods (2) or (3) are necessary if conditions exist favorable to corrosion of the conduit.

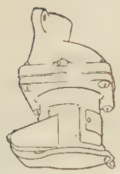
Style 1 plugs fit only Style 1 receptacles. Style 2 plugs fit only Style 2 receptacles.

Arktite Receptacle Equipment Complete

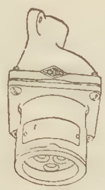
Includes Condulet, Receptacle and Receptacle Housing

15-Ampere

250-Volt D.C., 600-Volt A.C.



Type QEE, with Spring Door Housing



Type QEE, with Plain Housing

2-Wire

Style Housing	Size Conduit Inches	Style 1 2-Wire, 2-Pole Mfr's. No.	Style 1 Price Each	Style 2 2-Wire, 3-Pole Mfr's. No.	Style 2 Price Each
Spring Door	½	QEE11612	$6.25	QEE12613	$9.10
	¾	QEE21612	6.35	QEE22613	9.20
	1	QEE31612	6.45	QEE32613	9.30
Plain	½	QEE11312	5.40	QEE12313	8.10
	¾	QEE21312	5.50	QEE22313	8.20
	1	QEE31312	5.60	QEE32313	8.30

3-Wire

Style Housing	Size Conduit Inches	Style 1 3-Wire, 3-Pole Mfr's. No.	Style 1 Price Each	Style 2 3-Wire, 4-Pole Mfr's. No.	Style 2 Price Each
Spring Door	½	QEE11613	$7.75	QEE12614	$10.10
	¾	QEE21613	7.85	QEE22614	10.20
	1	QEE31613	7.95	QEE32614	10.30
Plain	½	QEE11313	6.75	QEE12314	9.00
	¾	QEE21313	6.85	QEE22314	9.10
	1	QEE31313	6.95	QEE32314	9.20

4-Wire

Style Housing	Size Conduit Inches	Style 1 4-Wire, 4-Pole Mfr's. No.	Style 1 Price Each	Style 2 4-Wire, 5-Pole Mfr's. No.	Style 2 Price Each
Spring Door	¾	QEE21614	$8.65	QEE22615	$11.40
	1	QEE31614	8.75	QEE32615	11.50
Plain	¾	QEE21314	7.65	QEE22315	10.30
	1	QEE31314	7.75	QEE32315	10.40

5-Wire

Style Housing	Size Conduit Inches	Style 1 5-Wire, 5-Pole Mfr's. No.	Style 1 Price Each	Style 2
Spring Door	¾	QEE21615	$9.85	Not Made
	1	QEE31615	9.95	Not Made
Plain	¾	QEE21315	8.85	Not Made
	1	QEE31315	9.85	Not Made

Style 1 plugs fit only style 1 receptacles.

Style 2 plugs fit only style 2 receptacles.

Receptacle equipments listed above are complete with either spring door housing or plain housing.

Other receptacle equipments with condulets of the QE series may be made from an assembly of condulets and receptacle housings.

Information furnished upon request.

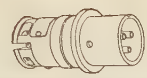
Cadmium-galvanized is the standard finish on Arktite receptacle equipment; aluminum on plugs.

Type CP Plugs

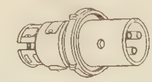
With Cable Grip

15-Ampere

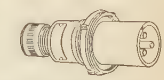
250 Volt D.C., 600-Volt A.C.



Without Clamping Nut



With Clamping Nut



With Rubber Bushing and Clamping Nut (Watertight)

2-Wire

Description	Diameter Cable Inches	Style 1 2-Wire, 2-Pole Mfr's No.	Style 1 Price Each	Style 2 2-Wire, 3-Pole Mfr's No.	Style 2 Price Each
Without Clamping Nut	.313– .500	CP112	$3.70	....	....
	.500– .750	CP312	3.70	....	....
	.438– .750	......	....	CP2113	$6.30
With Clamping Nut	.500– .750	CP412	4.20	....	....
	.438– .750	......	....	CP2213	6.85
	.688– .938	......	....	CP2413	6.85
With Rubber Bushing, No Clamping Nut	.250– .375	CP6312	5.50	....	....
	.375– .500	CP6412	5.50	....	.....
	.500– .625	CP6512	5.50	CP7513	7.80
With Rubber Bushing and Clamping Nut (Watertight)	.250– .375	CP5312	6.00	....	....
	.375– .500	CP5412	6.00	....	.....
	.500– .625	CP5512	6.00	CP8513	8.35

3-Wire

Description	Diameter Cable Inches	Style 1 3-Wire, 3-Pole Mfr's No.	Style 1 Price Each	Style 2 3-Wire, 4-Pole Mfr's No.	Style 2 Price Each
Without Clamping Nut	.438– .750	CP113	$5.00	CP2114	$6.90
	.688– .938	CP313	5.00	CP2314	6.90
	.875–1.188	CP713	5.00	CP2714	6.90
With Clamping Nut	.438– .750	CP213	5.55	CP2214	7.50
	.688– .938	CP413	5.55	CP2414	7.50
	.875–1.188	CP813	5.55	CP2814	7.50
With Rubber Bushing, No Clamping Nut	.500– .625	CP6513	6.80	CP7514	8.30
	.625– .750	CP6613	6.80	CP7614	8.30
	.750– .875	CP6713	6.80	CP7714	8.30
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5513	7.35	CP8514	8.90
	.625– .750	CP5613	7.35	CP8614	8.90
	.750– .875	CP5713	7.35	CP8714	8.90

4-Wire

Description	Diameter Cable Inches	Style 1 4-Wire, 4-Pole Mfr's No.	Style 1 Price Each	Style 2 4-Wire, 5-Pole Mfr's No.	Style 2 Price Each
Without Clamping Nut	.438– .750	CP114	$5.60	....	.....
	.688– .938	CP314	5.60	....	.....
	.875–1.188	CP714	5.60	....	.....
With Clamping Nut	.438– .750	CP214	6.20	....	.....
	.688– .938	CP414	6.20	....	.....
	.875–1.188	CP814	6.20	....	.....
With Rubber Bushing, No Clamping Nut	.500– .625	CP6514	7.60	CP7515	$10.50
	.625– .750	CP6614	7.60	CP7615	10.50
	.750– .875	CP6714	7.60	CP7715	10.50
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5514	8.20	CP8515	11.45
	.625– .750	CP5614	8.20	CP8615	11.45
	.750– .875	CP5714	8.20	CP8715	11.45

5-Wire

Description	Diameter Cable Inches	Style 1 5-Wire, 5-Pole Mfr's No.	Style 1 Price Each	Style 2
Without Clamping Nut	.500– .875	CP1115	$7.15	Not Made
With Clamping Nut	.500– .875	CP1215	8.10	Not Made
With Rubber Bushing, No Clamping Nut	.500– .625	CP6515	8.85	Not Made
	.625– .750	CP6615	8.85	Not Made
	.750– .875	CP6715	8.85	Not Made
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5515	9.80	Not Made
	.625– .750	CP5615	9.80	Not Made
	.750– .875	CP5715	9.80	Not Made

Style 1 plugs fit only style 1 receptacles.
Style 2 plugs fit only style 2 receptacles.

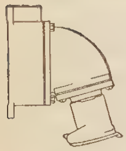
Cadmium-galvanized is the standard finish on Arktite receptacle equipment; aluminum on plugs.

Arktite Receptacle Equipment Complete

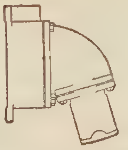
Includes Condulet, Adapter, Receptacle and Receptacle Housing

30-Ampere

250-Volt D.C., 600-Volt A.C.



Type AJA, with Spring Door Housing



Type AJA, with Plain Housing

2-Wire

Style Housing	Size Conduit	Style 1 2-Wire, 2-Pole Mfr's. No.	Price Each	Style 2 2-Wire, 3-Pole Mfr's. No.	Price Each
Spring Door	¾	AJA21632	$15.40	AJA22633	$17.20
	1	AJA31632	15.50	AJA32633	17.30
Plain	¾	AJA21332	14.40	AJA22333	16.20
	1	AJA31332	14.50	AJA32333	16.30

3-Wire

Style Housing	Size Conduit	Style 1 3-Wire, 3-Pole Mfr's. No.	Price Each	Style 2 3-Wire, 4-Pole Mfr's. No.	Price Each
Spring Door	1	AJA31633	$15.80	AJA32634	$18.10
	1¼	AJA41633	15.90	AJA42634	18.20
Plain	1	AJA31333	14.80	AJA32334	16.85
	1¼	AJA41333	14.90	AJA42334	16.95

4-Wire

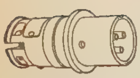
Style Housing	Size Conduit	Style 1 4-Wire, 4-Pole Mfr's. No.	Price Each	Style 2
Spring Door	1	AJA31634	$16.65	Not Made
	1¼	AJA41634	16.75	Not Made
Plain	1	AJA31334	15.40	Not Made
	1¼	AJA41334	15.50	Not Made

Type CP Plugs

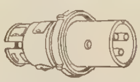
With Cable Grip

30-Ampere

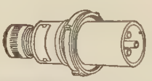
250 Volt D.C., 600 Volt A.C.



Without Clamping Nut



With Clamping Nut



With Rubber Bushing and Clamping Nut (Watertight)

Description	Diameter Cable Inches	Style 1 2-Wire, 2-Pole Mfr's. No.	Price Each	Style 2 2-Wire, 3-Pole Mfr's. No.	Price Each
Without Clamping Nut	.500– .875	CP132	$6.00	CP2133	$7.55
	.750–1.188	CP332	6.00	CP2333	7.55
With Clamping Nut	.500– .875	CP232	6.75	CP2233	8.30
	.750–1.188	CP432	6.75	CP2433	8.30
With Rubber Bushing, No Clamping Nut	.500– .625	CP6532	8.05	CP7533	9.30
	.625– .750	CP6632	8.05	CP7633	9.30
	.750– .875	CP6732	8.05	CP7733	9.30
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5532	8.80	CP8533	10.05
	.625– .750	CP5632	8.80	CP8633	10.05
	.750– .875	CP5732	8.80	CP8733	10.05

Style 1 plugs fit only style 1 receptacles.
Style 2 plugs fit only style 2 receptacles.

Receptacle equipments listed above are complete with either spring door housing or plain housing. Other receptacle equipments with Condulets of the QE series may be made from an assembly of Condulets and receptacle housings.

Information furnished upon request.

Cadmium-galvanized is the standard finish on Arktite receptacle equipments; aluminum on plugs.

Type CP Plugs

With Cable Grip

30-Ampere

250 Volt D.C., 600 Volt A.C.

3-Wire

Description	Diameter Cable Inches	Style 1 3-Wire, 3-Pole Mfr's. No.	Price Each	Style 2 3-Wire, 4-Pole Mfr's. No.	Price Each
Without Clamping Nut	.500– .875	CP133	$6.35	....	.....
	.750–1.188	CP333	6.35	....	.....
With Clamping Nut	.500– .875	CP233	7.10	....	.....
	.750–1.188	CP433	7.10	....	.....
With Rubber-Bushing, No Clamping Nut	.500– .625	CP6533	8.50	CP7534	$10.20
	.625– .750	CP6633	8.50	CP7634	10.20
	.750– .875	CP6733	8.50	CP7734	10.20
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5533	9.25	CP8534	11.00
	.625– .750	CP5633	9.25	CP8634	11.00
	.750– .875	CP5733	9.25	CP8734	11.00

4-Wire

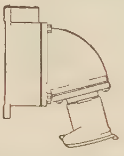
Description	Diameter Cable Inches	Style 1 4-Wire, 4-Pole Mfr's. No.	Price Each	Style 2
Without Clamping Nut	.688–1.000	CP134	$7.25	Not Made
	.938–1.469	CP334	7.25	Not Made
With Clamping Nut	.688–1.000	CP234	8.10	Not Made
	.938–1.469	CP434	8.10	Not Made
With Rubber Bushing, No Clamping Nut	.500– .625	CP6534	9.45	Not Made
	.625– .750	CP6634	9.45	Not Made
	.750– .875	CP6734	9.45	Not Made
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5534	10.30	Not Made
	.625– .750	CP5634	10.30	Not Made
	.750– .875	CP5734	10.30	Not Made

Arktite Receptacle Equipment Complete

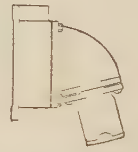
Includes Condulet, Adapter, Receptacle and Receptacle Housing

60-Ampere

250 Volt D.C., 600 Volt A.C.



Type AJA, with Spring Door Housing



Type AJA, with Plain Housing

2-Wire

Style Housing	Size Conduit	Style 1 2-Wire, 2-Pole Mfr's. No.	Price Each	Style 2 2-Wire, 3-Pole Mfr's. No.	Price Each
Spring Door	1¼	AJA41662	$16.80	AJA42663	$19.00
	1½	AJA51662	16.90	AJA52663	19.10
Plain	1¼	AJA41362	15.55	AJA42363	17.75
	1½	AJA51362	15.65	AJA52363	17.85

3-Wire

Style Housing	Size Conduit	Style 1 3-Wire, 3-Pole Mfr's. No.	Price Each	Style 2 3-Wire, 4-Pole Mfr's. No.	Price Each
Spring Door	1¼	AJA41663	$17.10	AJA42664	$20.25
	1½	AJA51663	17.20	AJA52664	20.35
Plain	1¼	AJA41363	15.85	AJA42364	18.85
	1½	AJA51363	15.95	AJA52364	18.95

4-Wire

Style Housing	Size Conduit	Style 1 4-Wire, 4-Pole Mfr's. No.	Price Each	Style 2
Spring Door	1½	AJA51664	$18.65	Not Made
Plain	1½	AJA51364	17.25	Not Made

Style 1 plugs fit only style 1 receptacles.
Style 2 plugs fit only style 2 receptacles.

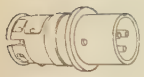
Cadmium-galvanized is the standard finish on Arktite receptacle equipment; aluminum on plugs.

Type CP Plugs

With Cable Grip

60-Ampere

250 Volts D.C., 600 Volts A.C.



Without Clamping Nut

With Clamping Nut

With Rubber Bushing and Clamping Nut (Watertight)

2-Wire

Description	Diameter Cable Inches	Style 1 2-Wire, 2-Pole Mfr's. No.	Style 1 2-Wire, 2-Pole Price Each	Style 2 2-Wire, 3-Pole Mfr's. No.	Style 2 2-Wire, 3-Pole Price Each
Without Clamping Nut	.750–1.188	CP162	$8.00	CP2163	$8.65
	1.188–1.813	CP362	8.00	CP2363	8.65
With Clamping Nut	.750–1.188	CP262	8.85	CP2263	9.50
	1.188–1.813	CP462	8.85	CP2463	9.50
With Rubber Bushing, No Clamping Nut	.500– .625	CP6562	12.50	CP7563	13.50
	.625– .750	CP6662	12.50	CP7663	13.50
	.750– .875	CP6762	12.50	CP7763	13.50
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5562	13.35	CP8563	14.35
	.625– .750	CP5662	13.35	CP8663	14.35
	.750– .875	CP5762	13.35	CP8763	14.35

3-Wire

		Style 1 3-Wire, 3-Pole		Style 2 3-Wire, 4-Pole	
Without Clamping Nut	.750–1.188	CP163	$8.15	.....	.....
	1.188–1.813	CP363	8.15	.....	.....
With Clamping Nut	.750–1.188	CP263	9.00	.....	.....
	1.188–1.813	CP463	9.00	.....	.....
With Rubber Bushing, No Clamping Nut	.500– .625	CP6563	12.75	.....	.....
	.625– .750	CP6663	12.75	CP7664	$14.60
	.750– .875	CP6763	12.75	CP7764	14.60
With Rubber Bushing and Clamping Nut (Watertight)	.500– .625	CP5563	13.60	.....	.....
	.625– .750	CP5663	13.60	CP8664	15.45
	.750– .875	CP5763	13.60	CP8764	15.45

4-Wire

		Style 1 4-Wire, 4-Pole		Style 2
Without Clamping Nut	.938–1.313	CP164	$9.15	Not Made
	1.313–2.063	CP364	9.15	Not Made
With Clamping Nut	.938–1.313	CP264	10.15	Not Made
	1.313–2.063	CP464	10.15	Not Made
With Rubber Bushing, No Clamping Nut	.625– .750	CP6664	13.85	Not Made
	.750– .875	CP6764	13.85	Not Made
	.875–1.000	CP6864	13.85	Not Made
With Rubber Bushing and Clamping Nut (Watertight)	.625– .750	CP5664	14.85	Not Made
	.750– .875	CP5764	14.85	Not Made
	.875–1.000	CP5864	14.85	Not Made

Style 1 plugs fit only style 1 receptacles.

Style 2 plugs fit only style 2 receptacles.

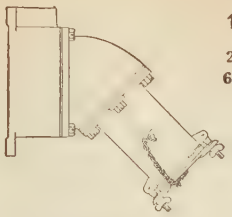
Cadmium-galvanized is the standard finish on Arktite receptacle equipment; aluminum on plugs.

Arktite Receptacle Equipment Complete

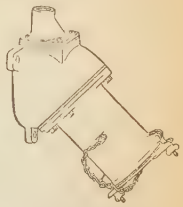
Schedule CR

100-Ampere

250 Volts D.C.
600 Volts, A.C.



Type AJA
Includes Condulet, Adapter, Receptacle, and Receptacle Housing



Type AJ
Includes Condulet, Receptacle, Receptacle Housing, and Hub Plate

Type AJA Condulet is square, and can therefore be mounted with hub at top, bottom, right or left.
Style 1—grounded through shell.
Style 2—grounded through shell and extra pole.
Style 1 plugs fit only style 1 receptacles.
Style 2 plugs fit only style 2 receptacles.

2-Wire

Description	Size In.	Style 1 2-Wire, 2-Pole Cat. No.	Style 1 2-Wire, 2-Pole Each	Style 2 2-Wire, 3-Pole Cat. No.	Style 2 2-Wire, 3-Pole Each
Type AJA Watertight	1½	AJA51102	$39.70	AJA52103	$49.70
	2	AJA61102	39.80	AJA62103	49.80
Type AJ, Non-Watertight	1½	AJ581102	33.75	AJ582103	43.75
	2	AJ681102	33.85	AJ682103	43.85

3-Wire

Description	Size In.	Style 1 3-Wire, 3-Pole Cat. No.	Style 1 3-Wire, 3-Pole Each	Style 2 3-Wire, 4-Pole Cat. No.	Style 2 3-Wire, 4-Pole Each
Type AJA Watertight	1½	AJA51103	$40.40	AJA52104	$51.40
	2	AJA61103	40.50	AJA62104	51.50
Type AJ, Non-Watertight	1½	AJ581103	34.45	AJ582104	45.45
	2	AJ681103	34.55	AJ682104	45.55

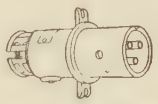
Other styles and sizes of conduit hub plates of the YYP8 series can be substituted for the ones listed with Type AJ at the difference in the list prices.

Arktite Plugs with Cable Grip

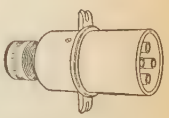
Schedule CR

100-Ampere

250 Volts D.C.
600 Volts A.C.



Without Rubber Bushing



With Rubber Bushing (Watertight)

Style 1—grounded through shell.
Style 2—grounded through shell and extra pole.
Style 1—plugs fit only style 1 receptacles.
Style 2—plugs fit only style 2 receptacles.

2-Wire

Description	Diameter Cable Inches	Style 1 2-Wire, 2-Pole Cat. No.	Style 1 2-Wire, 2-Pole Each	Style 2 2-Wire, 3-Pole Cat. No.	Style 2 2-Wire, 3-Pole Each
Without Rubber Bushing	.938 to 1.469	CP1102	$18.80	CP21103	$23.60
	1.313 to 2.063	CP3102	18.80	CP23103	23.60
With Rubber Bushing (Watertight)	.875 to 1.000	CP58102	25.70	CP88103	29.00
	1.000 to 1.188	CP59102	25.70	CP89103	29.00
	1.188 to 1.375	CP511102	25.70	CP811103	29.00
	1.375 to 1.625	CP513102	25.70	CP813103	29.00
	1.625 to 1.875	CP515102	25.70	CP815103	29.00

3-Wire

		Style 1 3-Wire, 3-Pole		Style 2 3-Wire, 4-Pole	
Without Rubber Bushing	9.38 to 1.469	CP1103	$19.75	.....	.....
	1.313 to 2.063	CP3103	19.75	.....	.....
	1.188 to 1.813	.....	.....	CP21104	$26.00
	1.750 to 2.563	.....	.....	CP23104	26.00
With Rubber Bushing (Watertight)	.875 to 1.000	CP58103	27.00	.....	.....
	1.000 to 1.188	CP59103	27.00	CP89104	33.00
	1.188 to 1.375	CP511103	27.00	CP811104	33.00
	1.375 to 1.625	CP513103	27.00	CP813104	33.00
	1.625 to 1.875	CP515103	27.00	CP815104	33.00

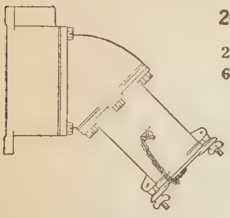
Cadmium-galvanized is the standard finish for Arktite receptacle equipment; aluminum, for plugs.

Arktite Receptacle Equipment Complete

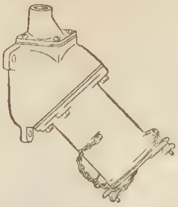
Schedule CR

200-Ampere

250 Volts D.C.
600 Volts A.C.



Type AJA
Includes Condulet, Adapter, Receptacle, and Receptacle Housing



Type AJ
Includes Condulet, Receptacle, Receptacle Housing, and Hub Plate

Type AJA Condulet is square, and can therefore be mounted with hub at top, bottom, right or left.

Style 1—grounded through shell.
Style 2—grounded through shell and extra pole.
Style 1 plugs fit only style 1 receptacles.
Style 2 plugs fit only style 2 receptacles.

2-Wire

Description	Size In.	Style 1 2-Wire, 2-Pole Cat. No.	Each	Style 2 2-Wire, 3-Pole Cat. No.	Each
Type AJA Watertight	2	AJA61202	$95.55	AJA62203	$109.05
	2½	AJA71202	95.65	AJA72203	109.15
Type AJ, Non-Watertight	2	AJ681202	85.75	AJ682203	100.25
	2½	AJ781202	85.85	AJ782203	100.35

3-Wire

Description	Size In.	Style 1 3-Wire, 3-Pole Cat. No.	Each	Style 2 3-Wire, 4-Pole Cat. No.	Each
Type AJA Watertight	2½	AJA71203	$104.15	AJA72204	$123.65
	3	AJA81203	104.25	AJA82204	123.75
Type AJ, Non-Watertight	2½	AJ781203	94.35	AJ782204	113.85

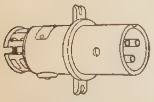
Other styles and sizes of conduit hub plates of the YYP8 series can be substituted for the ones listed with Type AJ at the difference in the list prices.

Arktite Plugs with Cable Grip

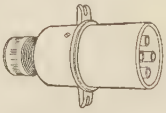
Schedule CR

200-Ampere

250 Volts D.C.
600 Volts A.C.



Without Rubber Bushing



With Rubber Bushing (Watertight)

Style 1—grounded through shell.
Style 2—grounded through shell and extra pole.
Style 1—plugs fit only style 1 receptacles.
Style 2—plugs fit only style 2 receptacles.

2-Wire

Description	Diameter Cable Inches	Style 1 2-Wire, 2-Pole Cat. No.	Each	Style 2 2-Wire, 3-Pole Cat. No.	Each
Without Rubber Bushing	1.188 to 1.813	CP1202	$40.00	CP21203	$50.00
	1.750 to 2.563	CP3202	40.00	CP23203	50.00
With Rubber Bushing (Watertight)	1.000 to 1.188	CP59202	48.00	CP89203	56.00
	1.188 to 1.375	CP511202	48.00	CP811203	56.00
	1.375 to 1.625	CP513202	48.00	CP813203	56.00
	1.625 to 1.875	CP515202	48.00	CP815203	56.00
	1.875 to 2.188	CP517202	48.00	CP817203	56.00
	2.188 to 2.500	CP520202	48.00	CP820203	56.00

3-Wire

Description	Diameter Cable Inches	Style 1 3-Wire, 3-Pole Cat. No.	Each	Style 2 3-Wire, 4-Pole Cat. No.	Each
Without Rubber Bushing	1.188 to 1.813	CP1203	$45.00	....	.....
	1.750 to 2.563	CP3203	45.00	....	.....
	1.313 to 2.063	....	.....	CP21204	$58.50
	2.000 to 3.250	....	.....	CP23204	58.50
With Rubber Bushing (Watertight)	1.000 to 1.188	CP59203	52.50	CP89204	65.50
	1.188 to 1.375	CP511203	52.50	CP811204	65.50
	1.375 to 1.625	CP513203	52.50	CP813204	65.50
	1.625 to 1.875	CP515203	52.50	CP815204	65.50
	1.875 to 2.188	CP517203	52.50	CP817204	65.50
	2.188 to 2.500	CP520203	52.50	CP820204	65.50

Cadmium-galvanized is the standard finish for Arktite receptacle equipment; aluminum, for plugs.

QE Series Condulets

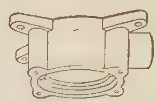
Schedule CR

Take Arktite 15, 30 and 60-ampere receptacle housings; and housings for snap switches and plug receptacles.

Cadmium-galvanized is the standard finish.

Standard package quantity, 25.

Type QE



Cat. No.	Each	Size In.	Form
QE110	$.90	½	10
QE210	1.00	¾	10
QE310	1.10	1	10
QE120	1.30	½	20
QE220	1.40	¾	20
QE320	1.50	1	20
QE420	1.60	1¼	20
QE520	1.70	1½	20

Type QEC

Cat. No.	Each	Size In.	Form
QEC110	$1.00	½	10
QEC210	1.10	¾	10
QEC310	1.20	1	10
QEC120	1.40	½	20
QEC220	1.50	¾	20
QEC320	1.60	1	20
QEC420	1.70	1¼	20
QEC520	1.80	1½	20

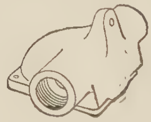
Type QEE

Cat. No.	Each	Size In.	Form
QEE110	$1.00	½	10
QEE210	1.10	¾	10
QEE310	1.20	1	10
QEE120	1.45	½	20
QEE220	1.55	¾	20
QEE320	1.65	1	20
QEE420	1.75	1¼	20
QEE520	1.85	1½	20

Type QEF

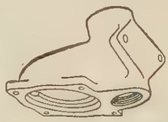
Cat. No.	Each	Size In.	Form
QEF110	$1.15	½	10
QEF210	1.25	¾	10
QEF310	1.35	1	10
QEF120	1.60	½	20
QEF220	1.70	¾	20
QEF320	1.80	1	20
QEF420	1.90	1¼	20
QEF520	2.00	1½	20

Type QEJ



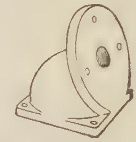
Cat. No.	Each	Size In.	Form
QEJ110	$1.30	½	10
QEJ210	1.40	¾	10
QEJ310	1.50	1	10
QEJ510	1.70	1½	20
QEJ120	1.75	½	20
QEJ220	1.85	¾	20
QEJ320	1.95	1	20
QEJ420	2.05	1¼	20
QEJ520	2.15	1½	20

Type QED



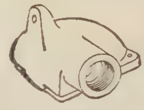
Cat. No.	Each	Size In.	Form
QED110	$1.45	½	10
QED210	1.55	¾	10
QED310	1.65	1	10
QED120	1.90	½	20
QED220	2.00	¾	20
QED320	2.10	1	20
QED420	2.20	1¼	20
QED520	2.30	1½	20

Type QEG



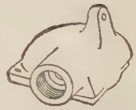
Cat. No.	Each	Size In.	Form
QEG110	$1.20	½	10
QEG210	1.30	¾	10
QEG310	1.40	1	10
QEG120	1.70	½	20
QEG220	1.80	¾	20
QEG320	1.90	1	20
QEG420	2.00	1¼	20
QEG520	2.10	1½	20

Type QEK



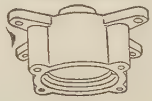
Cat. No.	Each	Size In.	Form
QEK110	$1.00	½	10
QEK210	1.10	¾	10
QEK310	1.20	1	10
QEK120	1.45	½	20
QEK220	1.55	¾	20
QEK320	1.65	1	20
QEK420	1.75	1¼	20
QEK520	1.85	1½	20

Type QEP



Cat. No.	Each	Size In.	Form
QEP110	$1.00	½	10
QEP210	1.10	¾	10
QEP310	1.20	1	10
QEP120	1.45	½	20
QEP220	1.55	¾	20
QEP320	1.65	1	20
QEP420	1.75	1¼	20
QEP520	1.85	1½	20

Type QEA



Cat. No.	Each	Size In.	Form
QEA110	$.90	½	10
QEA210	1.00	¾	10
QEA310	1.10	1	10
QEA120	1.30	½	20
QEA220	1.40	¾	20
QEA320	1.50	1	20
QEA420	1.60	1¼	20
QEA520	1.70	1½	20

Receptacle Housings

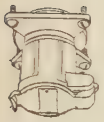
For Condulets of the QE Series, and Types AJ, AJA and AJB Adapters

Schedule CR

250 Volts D.C., 600 Volts A.C.

These receptacle housings take Arktite circuit-breaking plugs. They are furnished complete with gasket. Cadmium-galvanized is the standard finish.

With Spring Door



Size	Capacity	Style 1—Grounded Through Shell: Cat. No.	Each	For Circuits	Style 2—Grounded Through Shell and Extra Pole: Cat. No.	Each	For Circuits
For QE Series Form 10	15-Amp.	QE612	$5.25	2-Wire, 2-Pole	QE2613	$8.10	2-Wire, 3-Pole
		QE613	6.75	3-Wire, 3-Pole	QE2614	9.10	3-Wire, 4-Pole
		QE614	7.55	4-Wire, 4-Pole	QE2615	10.30	4-Wire, 5-Pole
		QE615	8.75	5-Wire, 5-Pole	.....	.....	.....
For 30 and 60-Amp. Adapters	30-Amp.	QE632	$7.75	2-Wire, 2-Pole	QE2633	$9.55	2-Wire, 3-Pole
		QE633	8.05	3-Wire, 3-Pole	QE2634	10.35	3-Wire, 4-Pole
		QE634	8.90	4-Wire, 4-Pole	.....	.....	.....
	60-Amp.	QE662	$8.95	2-Wire, 2-Pole	QE2663	$11.15	2-Wire, 3-Pole
		QE663	9.25	3-Wire, 3-Pole	QE2664	12.40	3-Wire, 4-Pole
		QE664	10.70	4-Wire, 4-Pole	.....	.....	.....

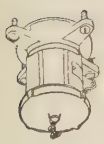
Plain

Size	Capacity	Style 1—Grounded Through Shell: Cat. No.	Each	For Circuits	Style 2—Grounded Through Shell and Extra Pole: Cat. No.	Each	For Circuits
For QE Series Form 10	15-Amp.	QE312	$4.40	2-Wire, 2-Pole	QE2313	$7.10	2-Wire, 3-Pole
		QE313	5.75	3-Wire, 3-Pole	QE2314	8.00	3-Wire, 4-Pole
		QE314	6.55	4-Wire, 4-Pole	QE2315	9.20	4-Wire, 5-Pole
		QE315	7.75	5-Wire, 5-Pole	.....	.....	.....
For 30 and 60-Amp. Adapters	30-Amp.	QE332	$6.75	2-Wire, 2-Pole	QE2333	$8.55	2-Wire, 3-Pole
		QE333	7.05	3-Wire, 3-Pole	QE2334	9.10	3-Wire, 4-Pole
		QE334	7.65	4-Wire, 4-Pole	.....	.....	.....
	60-Amp.	QE362	$7.70	2-Wire, 2-Pole	QE2363	$9.90	2-Wire, 3-Pole
		QE363	8.00	3-Wire, 3-Pole	QE2364	11.00	3-Wire, 4-Pole
		QE364	9.30	4-Wire, 4-Pole	.....	.....	.....

Threaded

Size	Capacity	Style 1—Grounded Through Shell: Cat. No.	Each	For Circuits	Style 2—Grounded Through Shell and Extra Pole: Cat. No.	Each	For Circuits
For QE Series Form 10	15-Amp.	QE712	$4.65	2-Wire, 2-Pole	QE2713	$7.35	2-Wire, 3-Pole
		QE713	6.00	3-Wire, 3-Pole	QE2714	8.25	3-Wire, 4-Pole
		QE714	6.80	4-Wire, 4-Pole	QE2715	9.45	4-Wire, 5-Pole
		QE715	8.00	5-Wire, 5-Pole	.....	.....	.....
For 30 and 60-Amp. Adapters	30-Amp.	QE732	$7.25	3-Wire, 2-Pole	QE2733	$9.05	2-Wire, 3-Pole
		QE733	7.55	3-Wire, 3-Pole	QE2734	9.60	3-Wire, 4-Pole
		QE734	8.15	4-Wire, 4-Pole	.....	.....	.....
	60-Amp.	QE762	$8.30	2-Wire, 2-Pole	QE2763	$10.50	2-Wire, 3-Pole
		QE763	8.60	3-Wire, 3-Pole	QE2764	11.60	3-Wire, 4-Pole
		QE764	9.90	4-Wire, 4-Pole	.....	.....	.....

With Aluminum Cap



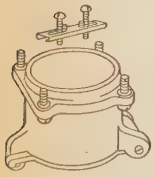
Size	Capacity	Style 1—Grounded Through Shell: Cat. No.	Each	For Circuits	Style 2—Grounded Through Shell and Extra Pole: Cat. No.	Each	For Circuits
For QE Series Form 10	15-Amp.	QE812	$5.30	2-Wire, 2-Pole	QE2813	$8.20	2-Wire, 3-Pole
		QE813	6.95	3-Wire, 3-Pole	QE2814	9.25	3-Wire, 4-Pole
		QE814	7.90	4-Wire, 4-Pole	QE2815	10.55	4-Wire, 5-Pole
		QE815	9.20	5-Wire, 5-Pole	.....	.....	.....
For 30 and 60-Amp. Adapters	30-Amp.	QE832	$8.15	2-Wire, 2-Pole	QE2833	$9.95	2-Wire, 3-Pole
		QE833	8.65	3-Wire, 3-Pole	QE2834	10.70	3-Wire, 4-Pole
		QE834	9.45	4-Wire, 4-Pole	.....	.....	.....
	60-Amp.	QE862	$9.70	2-Wire, 2-Pole	QE2863	$11.90	2-Wire, 3-Pole
		QE863	10.10	3-Wire, 3-Pole	QE2864	13.10	3-Wire, 4-Pole
		QE864	11.50	4-Wire, 4-Pole	.....	.....	.....

With Door

Size	Capacity	Cat. No.	Each	For Circuits	Cat. No.	Each	For Circuits
For 100 and 200-Amp. Adapters	100-Amp.	AJ102	$26.50	2-Wire, 2-Pole	AJ2103	$36.50	2-Wire, 3-Pole
		AJ103	27.20	3-Wire, 3-Pole	AJ2104	38.20	3-Wire, 4-Pole
		AJ104	30.20	4-Wire, 4-Pole	.....	.....	.....
	200-Amp.	AJ202	$64.00	2-Wire, 2-Pole	AJ2203	$77.50	2-Wire, 3-Pole
		AJ203	72.50	3-Wire, 3-Pole	AJ2204	92.00	3-Wire, 4-Pole
		AJ204	86.80	4-Wire, 4-Pole	.....	.....	.....

Type QE Weatherproof Switch Housings
For Condulets of the QE Series
Schedule CR

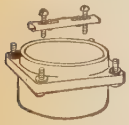
Furnished with adjustable bar.
Cadmium-galvanized is the standard finish.



With Spring Door

Take round base thumb knob snap switches or attachment plug receptacles.

Cat. No.	Each	Size	Std. Pkg.
QE1096	$1.65	Form 10	25
QE2096	2.05	Form 20	25



With Opening for Switch Key

Take round base lock snap switches.

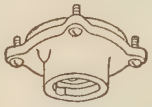
QE108	$.85	Form 10	25
QE208	1.20	Form 20	25

Type QE Plug Receptacle Housings
For Condulets of the QE Series
Schedule CR

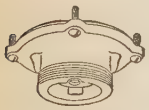
Cadmium-galvanized is the standard finish. This is necessary in order to insure a perfect ground connection between all metal parts in the grounding or safety circuit.

Take Type BP 30-Ampere, 250-Volt A. C. Plugs†

With Spring Door



Plain



Threaded

With Aluminum Cap

2-Pole

Furnished with 30-amp., 250-volt a.c. receptacle BR302.
Threaded housings are also furnished with gaskets.

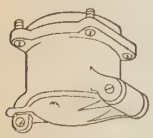
Cat. No.	Each	Style	Size	Std. Pkg.
QE6302	$4.60	With Spring Door	Form 10	25
QE 302	3.00	Plain	Form 10	25
QE7302	3.20	Threaded	Form 10	25
QE8302	4.15	With Brass Cap	Form 10	25

3-Pole

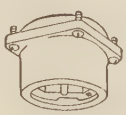
Furnished with 30-amp., 250-volt a.c. receptacle BR303.
Threaded housings are also furnished with gaskets.

QE6303	$5.30	With Spring Door	Form 10	25
QE 303	3.50	Plain	Form 10	25
QE7303	3.75	Threaded	Form 10	25
QE8303	5.10	With Brass Cap	Form 10	25

Take Type RQ 30-Ampere, 250-Volt Plugs



With Spring Door



Plain

2-Pole

Furnished with 30-amp., 250-volt receptacle RQH302.

QE1066	$3.60	With Spring Door	Form 10	25
QE 106	2.80	Plain	Form 10	25

3-Pole

Furnished with 30-amp., 250-volt receptacle RQH303.

QE2066	$5.10	With Spring Door	Form 20	25
QE 206	4.10	Plain	Form 20	25

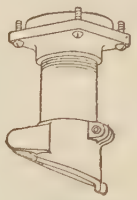
†Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

Type BP plugs listed on another page are for use with all of the receptacles listed above.

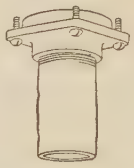
Type QE Plug Receptacle Housings
For Condulets of the QE Series
Schedule CR

Cadmium-galvanized is the standard finish. This is necessary in order to insure a perfect ground connection between all metal parts in the grounding or safety circuit.

Take Type BP 50-Ampere Electric Vehicle Charging Plugs



With Spring Door



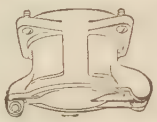
Plain

2-Pole

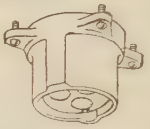
Furnished with 2-pole, 50-amp., 125-volt receptacle BR50.

Cat. No.	Each	Style	Size	Std. Pkg.
QE1076	$9.20	With Spring Door	Form 10	10
QE 107	7.40	Plain	Form 10	10

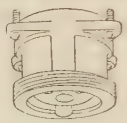
Take Type BP 60-Ampere, 600-Volt Plugs



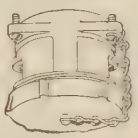
With Spring Door



Plain



Threaded



With Aluminum Cap

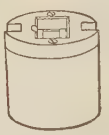
3-Pole

Furnished with 3-pole, 60-amp., 600-volt receptacle BR6036*.
Threaded housings are also furnished with gaskets.

QE66036	$7.95	With Spring Door	Form 20	10
QE 6036	6.45	Plain	Form 20	10
QE76036	6.70	Threaded	Form 20	10
QE86036	8.95	With Brass Cap	Form 20	10

Plug Receptacles
For Type QE Plug Receptacle Housings
Schedule CR

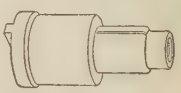
Type RQH
30 Amperes, 250 Volts



For use with plug receptacle housings QE106, QE206, QE1066 and QE2066.

Cat. No.	Each	Type	Std. Pkg.
RQH302	$2.00	2-Pole	25
RQH303	3.00	3-Pole	25

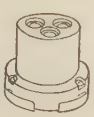
Type BR
50 Amperes, 125 Volts



For use with plug receptacle housings QE107 and QE1076.

Cat. No.	Each	Type	Std. Pkg.
BR50	$4.90	2-Pole	10

Type BR
60 Amperes, 600 Volts*



For use with plug receptacle housings QE6036, QE66036, QE76036, and QE86036.

Cat. No.	Each	Type	Std. Pkg.
BR6036	$5.00	3-Pole	10

*Underwriters' rules require an approved switch in series with receptacle of this rating.

Plugs

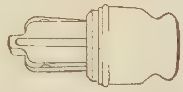
For Use with Plug Receptacles

Schedule CR

Type RQ plugs have aluminum handles. Cadmium-galvanized is the standard finish for other plug handles.

Type RQ

30 Amperes, 250 Volts

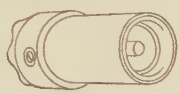


For use with plug receptacles RQH302 and RQH303.

Cat. No.	Each	Type	Std. Pkg.
RQ302	$3.50	2-Pole	25
RQ303	5.00	3-Pole	25

Type BP

50 Amperes, 125 Volts



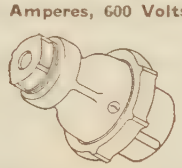
For plug receptacle BR50 (American Electric Vehicle Association Standard).

The BP50 plug takes twin or duplex flexible cable approximately ⅞ inch wide by ½ inch thick. The BP53 plug takes No. 6 armored mining machine cable, outside diameter 1⅛ inches.

BP50	$6.50	2-Pole	10
BP53	8.50	2-Pole	10

Type BP, for Flexible Cable

60 Amperes, 600 Volts*



For receptacle BR6036 in housings QE76036 and QE86036‡.

Furnished with clamping nut and rubber bushing (watertight). Gasket is also furnished.

Cat. No.	Each	Type	Diameter Cable Inches	Std. Pkg.
BP846036	$9.50	3-Pole	1.063 to 1.188	10
BP866036	9.50	3-Pole	.813 to .938	10

Type BP, for Armored Cable

60 Amperes, 600 Volts*

For receptacle BR6036 in housings QE76036 and QE86036‡.

Furnished with clamping nut and tapered split lead sleeve (can be made watertight with sealing compound).

Gasket is also furnished.

BP306036	$9.50	3-Pole	.734 to .813	10
BP326036	9.50	3-Pole	.859 to .906	10
BP336036	9.50	3-Pole	.906 to .953	10
BP346036	9.50	3-Pole	.953 to 1.000	10
BP366036	9.50	3-Pole	1.047 to 1.094	10
BP376036	9.50	3-Pole	1.094 to 1.141	10
BP396036	9.50	3-Pole	1.188 to 1.234	10

Type BP, for Flexible or Armored Cable

60 Amperes, 600 Volts*

For receptacle BR6036 in housings QE6036, QE66036, QE76036 and QE86036.

Furnished without clamping nut.

BP46036	$7.75	3-Pole	.813 to 1.063	10

*Underwriters' rules require an approved switch in series with receptacle of this rating.

‡Can also be used with housings QE6036 and QE66036.

Type BRM Plug Receptacle Condulets

Schedule CR

30 Amperes, 250 Volts A.C.*

Take Type BP plugs.

The 2-pole Condulets are furnished with 30-ampere, 250-volt receptacle BR2302.

The 3-pole Condulets are furnished with 30-ampere, 250-volt receptacle BR2303.

Threaded housings are also furnished with gaskets.

These plug receptacle condulets furnish a compact, convenient and rigid receptacle device. They are especially suitable for semi-permanent or temporary installation either for light or power, as in such installations it is desirable to include a device that will permit the conduit and wiring system to be easily broken and at the same time not sacrifice any of the protective features of rigid or flexible conduit.

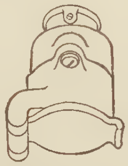
These Condulets take plugs for rigid or flexible conduit, or armored or other cable.

The threaded Condulets, when used with a watertight plug or the aluminum cap, are vaporproof. They make excellent devices for installation on locomotives, as they provide means whereby the conduit system can be easily removed or replaced in sections, as is necessary when a locomotive is to receive a thorough overhauling.

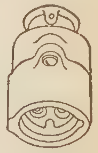
The plugs and receptacles are polarized. The receptacle housing is provided with a clip which makes contact with the shell of the plug, effectually grounding the plug through the conduit system.

The plug and receptacle contacts are self-aligning, and the receptacle contacts are completely enclosed in a body of molded insulating material. The prongs of the plug are protected by a steel sleeve.

Cadmium-galvanized is the standard finish for all plugs and receptacles. This insures a perfect ground connection between all metal parts in the grounding or safety circuit.



With Spring Door



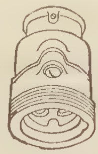
Plain

With Spring Door

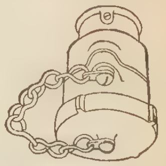
Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRM61302	$3.75	....	....
¾	25	BRM62302	3.85	BRM62303	$4.45
1	25	BRM63302	3.95	BRM63303	4.55

Plain

Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRM1302	$2.50	....	....
¾	25	BRM2302	2.60	BRM2303	$3.20
1	25	BRM3302	2.70	BRM3303	3.30



Threaded



With Aluminum Cap

Threaded

Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRM71302	$2.70	....	....
¾	25	BRM72302	2.80	BRM72303	$3.45
1	25	BRM73302	2.90	BRM73303	3.55

With Aluminum Cap

Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRM81302	$3.65	....	....
¾	25	BRM82302	3.75	BRM82303	$4.80
1	25	BRM83302	3.85	BRM83303	4.90

*Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

Type BRME Plug Receptacle Condulets

Schedule CR

30° Angle

30 Amperes, 250 Volts A.C.*

Take Type BP plugs.

The 2-pole Condulets are furnished with 30-ampere, 250-volt receptacle BR2302.

The 3-pole Condulets are furnished with 30-ampere, 250-volt receptacle BR2303.

Threaded housings are also furnished with gaskets.

Type BRME Plug Receptacle Condulet is for mounting on the wall or on the frame of a portable machine, by means of two heavy lugs. The Condulet is mounted at such an angle with the surface to which it is attached, that there is no danger of the operator injuring his knuckles when inserting or removing the plug.

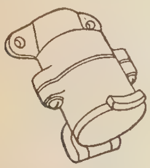
These receptacles furnish a compact, convenient, and rigid receptacle device. They take plugs for rigid or flexible conduit, or armored or other cable.

The threaded Condulets, when used with a watertight plug or the aluminum cap, are vaporproof. They make excellent devices for installation on locomotives, as they provide means whereby the conduit system can be easily removed or replaced in sections, as is necessary when a locomotive is to receive a thorough overhauling.

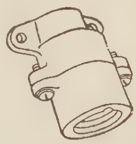
The plugs and receptacles are polarized. The receptacle housing is provided with a clip which makes contact with the shell of the plug, effectually grounding the plug through the conduit system.

The plug and receptacle contacts are self-aligning, and the receptacle contacts are completely enclosed in a body of molded insulating material. The prongs of the plug are protected by a steel sleeve.

Cadmium-galvanized is the standard finish for all plugs and receptacles. This insures a perfect ground connection between all metal parts in the grounding or safety circuit.



With Spring Door



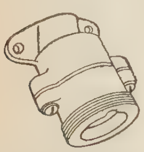
Plain

With Spring Door

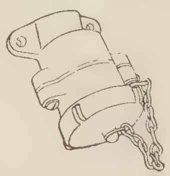
Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRME61302	$3.75	....	....
¾	25	BRME62302	3.85	BRME62303	$4.45
1	25	....	....	BRME63303	4.55

Plain

Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRME1302	$2.50	....	..
¾	25	BRME2302	2.60	BRME2303	$3.20
1	25	....	....	BRME3303	3.30



Threaded



With Aluminum Cap

Threaded

Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRME71302	$2.70	.... . .	....
¾	25	BRME72302	2.80	BRME72303	$3.45
1	25	....	....	BRME73303	3.55

With Aluminum Cap

Size In.	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	25	BRME81302	$3.65	....	....
¾	25	BRME82302	3.75	BRME82303	$4.80
1	25	....	....	BRME83303	4.90

*Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

Type BP Plugs

Schedule CR

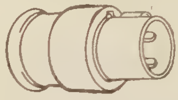
For use with Types BRB, BRD, BRG, BRM, BRME, BRY, and QE plug receptacle housings.

The 30-ampere plugs are arranged for soldered terminals. The 20-ampere plugs are equipped with binding screw terminals. Plugs so equipped with binding screw will not take wires larger than No. 12; consequently, these plugs are rated at 20 amperes. Otherwise, the 20 and 30-ampere plugs are exactly alike.

Grounding.—Provision is made for a grounding wire in the cable to connect frame of portable device to shell of plug. Grounding or safety circuit is completed through shell of plug, detent spring, receptacle housing, and conduit system. Detent spring in receptacle has three branches, two of which make contact before and break contact after the main circuit contacts. This method of grounding is N. E. C. standard.

Cadmium-galvanized is the standard finish for all plugs and receptacles. This insures a perfect ground connection between all metal parts in the grounding or safety circuit.

Standard package quantity for all plugs is 25.



For Flexible Cable

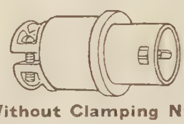
Furnished with clamp for flexible cable.

With composition handles (non-watertight).

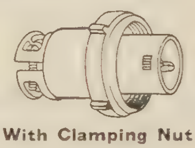
Without Clamping Nut

Diameter Opening in Cable Clamp Inches	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
30 Amperes, 250 Volts A.C.*				
.500 to .844 (a)	BP32	$3.60	......	.....
20 Amperes, 250 Volts A.C.†				
.500 to .844 (a)	BP22	$3.60	......	.....

For Flexible Conductor, Flexible Conduit, or Armored Conductor



Without Clamping Nut



With Clamping Nut

Furnished with clamp for flexible conductor, flexible conduit, or armored conductor.

With cast aluminum handles (non-watertight).

Diameter Opening in Cable Clamp Inches	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
Without Clamping Nut				
30 Amperes, 250 Volts A.C.*				
.500 to .875 (b)	BP532	$2.85	......	.....
.625 to 1.125 (c)	......	.....	BP533	$3.75
20 Amperes, 250 Volts A.C.†				
.500 to .875 (b)	BP522	$2.85	......	.....
.625 to 1.125 (c)	......	.....	BP523	$3.75
With Clamping Nut				
30 Amperes, 250 Volts A.C.*				
.500 to .875 (b)	BP732	$3.35	......	.....
.625 to 1.125 (c)	......	.....	BP733	$4.50
20 Amperes, 250 Volts A.C.†				
.500 to .875 (b)	BP722	$3.35	......	.....
.625 to 1.125 (c)	......	.....	BP723	$4.50

*Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

†Can be used on 20-ampere, 125-volt d.c. circuits; or on 20-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

(a) Clamp opening ½ to 27/32 inch takes most of the 2-wire and 3-wire rubber sheathed, fabric sheathed, and deck cables No. 14 to No. 8.

(b) Clamp opening ½ to ⅞ inch takes ⅜ and ½-inch flexible conduit, No. 14 to No. 8 two or three-conductor armored cable, and most of the 2-wire and 3-wire rubber sheathed, fabric sheathed, and deck cables No. 14 to No. 8.

(c) Clamp opening ⅝ to 1⅛ inch takes ½ and ¾-inch flexible conduit, No. 10 to No. 6 three-conductor armored cable, and most of the 3-wire and 4-wire rubber sheathed, fabric sheathed, and deck cables No. 12 to No. 6.

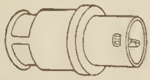
Type BP Plugs

Schedule CR

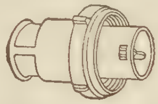
For use with Types BRB, BRD, BRG, BRM, BRME, BRY, and QE plug receptacle housings.

Standard package quantity for all plugs is 25.

For Rigid Conduit



Without Clamping Nut



With Clamping Nut

With cast aluminum handles.

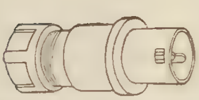
Without Clamping Nut

Diam. Conduit In.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
30 Amperes, 250 Volts A.C.*				
½	BP5132	$2.75	BP5133	$4.00
¾	BP5232	2.85	BP5233	4.10
1	BP5332	2.95	BP5333	4.20
20 Amperes, 250 Volts A.C.†				
½	BP5122	$2.75	BP5123	$4.00
¾	BP5222	2.85	BP5223	4.10
1	BP5322	2.95	BP5323	4.20

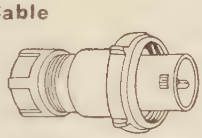
With Clamping Nut (Watertight)

Diam. Conduit In.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
30 Amperes, 250 Volts A.C.*				
½	BP7132	$3.25	BP7133	$4.75
¾	BP7232	3.35	BP7233	4.85
1	BP7332	3.45	BP7333	4.95
20 Amperes, 250 Volts A.C.†				
½	BP7122	$3.25	BP7123	$4.75
¾	BP7222	3.35	BP7223	4.85
1	BP7322	3.45	BP7323	4.95

For Flexible Cable



Without Clamping Nut



With Clamping Nut

Furnished with gland nut and tapered rubber bushing. With cast aluminum handles.

Without Clamping Nut

Diam. Clamp Opening Inches	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
30 Amperes, 250 Volts A.C.*				
.500 to .625	BP6532	$3.60	BP6533	$4.35
.625 to .750	BP6632	3.80	BP6633	4.55
.750 to .875	BP6732	4.00	BP6733	4.75
.875 to 1.000	....	....	BP6833	4.95
20 Amperes, 250 Volts A.C.†				
.500 to .625	BP6522	$3.60	BP6523	$4.35
.625 to .750	BP6622	3.80	BP6623	4.55
.750 to .875	BP6722	4.00	BP6723	4.75
.875 to 1.000	....	....	BP6823	4.95

With Clamping Nut (Watertight)

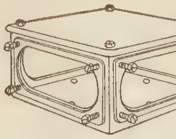
Diam. Clamp Opening Inches	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
30 Amperes, 250 Volts A.C.*				
.500 to .625	BP8532	$4.10	BP8533	$5.10
.625 to .750	BP8632	4.30	BP8633	5.30
.750 to .875	BP8732	4.50	BP8733	5.50
.875 to 1.000	....	....	BP8833	5.70
20 Amperes, 250 Volts, A.C.†				
.500 to .625	BP8522	$4.10	BP8523	$5.10
.625 to .750	BP8622	4.30	BP8623	5.30
.750 to .875	BP8722	4.50	BP8723	5.50
.875 to 1.000	....	....	BP8823	5.70

*Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

†Can be used on 20-ampere, 125-volt d.c. circuits; or on 20-ampere, 250-volt d.c. circuits if circuit is broken before plug is withdrawn.

RS Series Condulets

Schedule CR



Cadmium-galvanized finish. Furnished with cast feraloy cover, gasket and screws. The use of these Condulets provides an easy method of tapping a conduit system, where a Condulet body of this series has been installed in the line, by removing the blank plates and substituting plates with the desired sizes of hubs. Cover, hub plates, and blank side plates are gasketed, making the Condulet watertight.

Cat. No.	Each	Type	Inside Dimen. Inches	Std. Pkg.
RS 1	$9.25	RS	8½x8½x4	10
RSM1	7.85	RSM	8½x4½x4	10
RSS 1	6.75	RSS	4½x4½x4	10

Conduit Hub Plates

Schedule CR

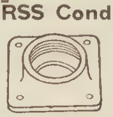
Cast feraloy, cadmium-galvanized finish.

For condulets of the RS series. Outside dimensions 8¹⁄₁₆x3½ inches.

RSP Series, for 8½x4-Inch Sides of Types RS and RSM Condulets

Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
With One Hub							
RSP1	$1.00	½	40	RSP5	$1.20	1½	40
RSP2	1.05	¾	40	RSP6	1.25	2	40
RSP3	1.10	1	40	RSP7	1.40	2½	40
RSP4	1.15	1¼	40	RSP8	1.65	3	40
With Two Hubs							
RSP11	$1.10	½	40	RSP54	$1.55	1½–1¼	40
RSP22	1.20	¾	40	RSP55	1.55	1½	40
RSP31	1.30	1–½	40	RSP62	1.75	2–¾	40
RSP33	1.30	1	40	RSP63	1.75	2–1	40
RSP42	1.40	1¼–¾	40	RSP64	1.75	2–1¼	40
RSP44	1.40	1¼	40	RSP65	1.75	2–1½	40
RSP52	1.55	1½–¾	40	RSP66	1.75	2	40
RSP53	1.55	1½–1	40	RSP73	1.95	2½–1	40
With Three Hubs							
RSP111	$1.20	½	40	RSP442	$1.65	1¼–1¼–¾	40
RSP222	1.35	¾	40	RSP444	1.65	1¼	40
RSP331	1.50	1–1–½	40	RSP553	1.90	1½–1½–1	40
RSP333	1.50	1	40	RSP555	1.90	1½	40

RSMP Series, for 4½x4-Inch Sides of Types RSM and RSS Condulets



RSMP series, for types RSM and RSS Condulets.
Outside dimensions, 3½x3½ inches.

With One Hub							
RSMP1	$.50	½	40	RSMP5	$.70	1½	40
RSMP2	.55	¾	40	RSMP6	.75	2	40
RSMP3	.60	1	40	RSMP7	.90	2½	40
RSMP4	.65	1¼	40	....	...	...	..

Side Plates

Cat. No.	Each	Size Inches	Std. Pkg.
RSP0	$.95	8½x4	40
RSMP0	.45	4½x4	40

Cast Covers with Gaskets

Cat. No.	Each	For Bodies	Std. Pkg.
RS00	$2.00	RS	10
RSM00	1.25	RSM	10
RSS00	.90	RSS	10

PR Series Junction Condulets

Schedule CR

For use where durable, watertight junction condulets of medium size are required, as in railroad yards and shops. Also suitable for underneath or overhead car wiring installations.

The hubs are so designed as to insure a clearance of at least ¾ of an inch between the surface wired over and the conduit; therefore, when these condulets are used on car roofs, there is no opportunity for the accumulation of cinders. Hubs are cast solid with the body and have an integral bushing and tapered thread.

The cover overhangs the condulet, and is held in place by 4 heavy brass cap screws. The joint is made watertight by a gasket.

The bottom of the condulet is reinforced at the center to allow drilling and tapping for an extra conduit or for the suspension of a center lamp fixture or car fixture of pedestal design.

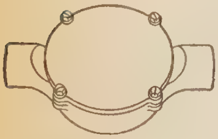
Inside diameter, 6⅛ inches; depth, varies with size.

Cadmium-galvanized is the standard finish.

Furnished with cast feraloy cover and gasket.

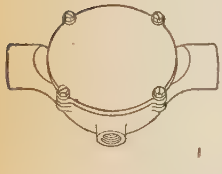
Standard package quantity is 10.

Type PRC



Cat. No.	Each	*Size Inches
PRC3	$4.75	1
PRC4	4.95	1¼
PRC5	5.15	1½
PRC6	5.55	2

Type PRT



Cat. No.	Each	*Size Inches
PRT3	$4.90	1–1–1
PRT4	5.10	1¼–1¼–1¼
PRT54	5.30	1½–1½–1¼
PRT5	5.30	1½–1½–1½
PRT65	5.70	2–2–1½

Type PRX

Cat. No.	Each	*Size Inches
PRX31	$5.10	1–1–½–½
PRX32	5.10	1–1–¾–¾
PRX3	5.10	1–1–1–1
PRX41	5.30	1¼–1¼–½–½
PRX42	5.30	1¼–1¼–¾–¾
PRX4	5.30	1¼–1¼–1¼–1¼
PRX51	5.55	1½–1½–½–½
PRX52	5.55	1½–1½–¾–¾
PRX53	5.55	1½–1½–1–1
PRX5	5.55	1½–1½–1½–1½
PRX61	6.00	2–2–½–½
PRX62	6.00	2–2–¾–¾
PRX63	6.00	2–2–1–1

*Sizes of end hubs, given first; side hubs, given last.

Type FJC Condulets

Schedule CR

For Floor Outlets

Type FJC meets conditions in factories, textile mills, technical schools or printing houses, where there are a number of individual motor driven machines and it is difficult to determine the final and permanent location of these machines when the preliminary layout is made or the conduit is installed.

It is general practice, in using a Type FJC Condulet, to drill the cover and attach a connector for flexible conduit; but rigid conduit can be used, if desired.

The over all dimensions of body exclusive of hubs are: Length 6⅜ inches; width, 4⅜ inches; depth, 4³⁄₁₆ inches.

Cadmium-galvanized is the standard finish for condulets and cast feraloy covers.

Furnished with cover and gasket.

Standard package quantity is 10.

Size Inches	With Cast Brass Cover Cat. No.	Each	With Cast Feraloy Cover Cat. No.	Each
1¼	FJC4000	$7.50	FJC400g	$5.75
1½	FJC5000	7.75	FJC500g	6.00

Y Series Condulets

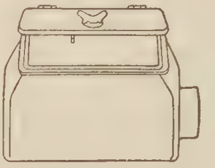
Schedule CR

Designed to take wires which will enter grooves or terminals of fuse cutout of the same rating as the condulet.

Hubs are cast solid with and are tangent to back of condulet. Furnished with sheet steel door, cutout fastening plate, bolts and nuts. Cadmium-galvanized, standard finish.

Drilled for seal wire at 10 cents advance in price.

Type Y

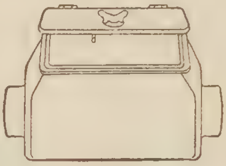


Takes main line fuse cutouts.

30 Amperes, 250 Volts

Size Inches	Std. Pkg.	2-Wire Cat. No.	2-Wire Each	3-Wire Cat. No.	3-Wire Each
½	15	Y1302	$2.35	......	.....
¾	15	Y2302	2.45	Y2303	$2.95

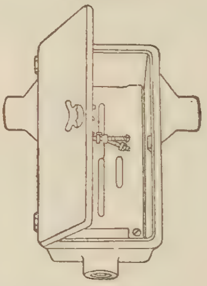
Type YC



Takes main line fuse cutouts.

Size Inches	Std. Pkg.	2-Wire Cat. No.	2-Wire Each	3-Wire Cat. No.	3-Wire Each
30 Amperes, 250 Volts					
½	15	YC1302	$2.50	YC1303	$3.00
¾	15	YC2302	2.60	YC2303	3.10
1	10	YC3302	2.70	YC3303	3.20
1¼	10	YC4302	2.80	YC4303	3.30
60 Amperes, 250 Volts					
¾	15	YC2602	$3.80	YC2603	$4.20
1	10	YC3602	3.90	....	....
1¼	10	....	....	YC4603	4.40

Type YS



Takes main line or single branch fuse cutouts.

Size Inches	Std. Pkg.	2-Wire Cat. No.	2-Wire Each	3-Wire Cat. No.	3-Wire Each
30 Amperes, 250 Volts					
½–½–½	15	YS1302	$2.90	YS 1303	$3.60
¾–¾–½*	15	YS21302	3.05	YS21303	3.75
¾–¾–¾	15	YS2302	3.05	....	....
1–1–½*	10	YS31302	3.20	....	....
1–1–1	10	YS3302	3.20	YS 3303	3.90
1¼–1¼–½*	10	YS41302	3.35	....	....
1½–1½–½*	5	....	....	YS51303	4.20
60 Amperes, 250 Volts					
1¼–1¼–¾*	10	....	....	YS42603	$6.40
1¼–1¼–1*	10	....	....	YS43603	6.40
1½–1½–1¼*	5	....	....	YS54603	6.60
2–2–1*	5	....	....	YS63603	6.80

*Mains, given first; branch, last.

YW Series Condulets

Schedule CR

For Cutouts—Without Hub Plates

Fuse cutouts are installed in a fireproof enclosure. These condulets have gasketed cast feraloy doors with adjustable eyebolt hinges. A tubular gasket is cemented in the door which, when closed, is watertight. Removable conduit hub plates, thoroughly gasketed, are secured to the cast feraloy body by 4 screws. These condulets are watertight, therefore, they are suitable for installation where dust, moisture or excessive gases are present.

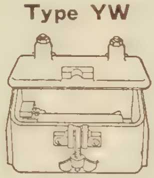
The removable conduit hub plates make it possible to cut these condulets into an existing installation without disturbing the conduit system.

Designed to take wires which will enter the grooves or terminals of the fuse cutout of the same rating as the condulet. The additional space in the hubs is for the passage of extra wires. These extra wires should not be larger than can be properly accommodated in the body of the condulet with the cutout installed.

Cutout fastening plates are slotted so that almost any standard make of cutouts can be mounted thereon by means of the bolts and nuts furnished with the cutout fastening plates.

Cadmium-galvanized is the standard finish.

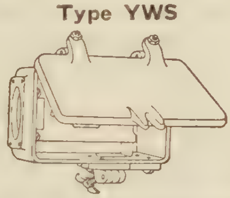
Type YW



Takes main line fuse cutouts, and removable conduit hub plates or plug receptacle housings. Furnished with cast feraloy door, gaskets and cutout fastening plates.

Cat. No.	Each	Rating Amp.	Rating Volt	No. of Wires	Takes Hub Plate	Takes Housing	Std. Pkg.
YW55302	$4.50	30	250	2	YYP5	BRY5	15
YW77303	5.45	30	250	2 or 3	YYP7	BRY7	15
YW77602	6.20	60	250	2	YYP7	BRY7	15
YW88603	7.50	60	250	3	YYP8	......	15
YW881002	9.40	100	250	2	YYP8	......	10
YW881003	11.30	100	250	3	YYP8	......	10
YW776016	7.40	30 or 60	600	1	YYP7	......	15
YW886036	10.40	30 or 60	600	3	YYP8	......	15

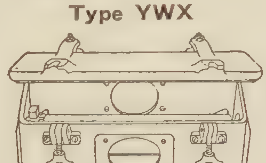
Type YWS



Takes main line or single branch fuse cutouts.

Cat. No.	Each	Rating Amp.	Rating Volt	No. of Wires	Takes Hub Plates	Takes Housing	Std. Pkg.
YWS55302	$5.50	30	250	2	YYP5	BRY5	15
YWS77303	6.40	30	250	2 or 3	YYP7	BRY7	15
YWS77602	7.95	60	250	2	YYP7	BRY7	15
YWS88603	9.00	60	250	3	YYP8	......	15
YWS886036	11.10	30 or 60	600	3	YYP8	......	15

Type YWX



Takes double branch fuse cutouts.

Cat. No.	Each	Rating Amp.	Rating Volt	No. of Wires	Takes Hub Plates	Takes Housing	Std. Pkg.
YWX77302	$7.80	30	250	2 or 3 to 2	YYP7	BRY7	15
YWX77303	8.95	30	250	3	YYP7	BRY7	15
YWX77602	10.85	60	250	2 or 3 to 2	YYP7	BRY7	15
YWX88603	12.05	60	250	3	YYP8	......	15

Type BRY Plug Receptacle Housings

Schedule CR

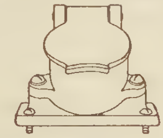
For Condulets of YW Series; or Any Condulet That Takes Conduit Hub Plates of YYP5 or YYP7 Series

***30-Ampere, 250-Volt A.C.**

Takes Type BP Plugs; 2-pole housings are furnished with 30-ampere, 250-volt receptacle BR302; 3-pole housings with 30-ampere, 250-volt receptacle BR303.

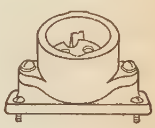
Cadmium-galvanized is the standard finish on all plugs and receptacles. This is necessary in order to insure a perfect ground connection between all metal parts in the grounding or safety circuit.

With Spring Door



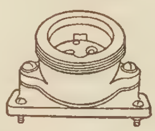
Cat. No.	Each	Size	No. of Poles	Std. Pkg.
BRY56302	$5.10	BRY5	2	15
BRY76302	5.20	BRY7	2	15
BRY76303	6.30	BRY7	3	15

Plain



Cat. No.	Each	Size	No. of Poles	Std. Pkg.
BRY5302	$3.50	BRY5	2	15
BRY7302	3.60	BRY7	2	15
BRY7303	4.50	BRY7	3	15

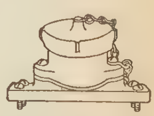
Threaded



Furnished with gaskets.

Cat. No.	Each	Size	No. of Poles	Std. Pkg.
BRY57302	$3.70	BRY5	2	15
BRY77302	3.80	BRY7	2	15
BRY77303	4.75	BRY7	3	15

With Aluminum Cap



Furnished with gaskets.

Cat. No.	Each	Size	No. of Poles	Std. Pkg.
BRY58302	$4.65	BRY5	2	15
BRY78302	4.75	BRY7	2	15
BRY78303	6.10	BRY7	3	15

*Can be used on 25-ampere, 125-volt d.c. circuits; or on 30-ampere, 250-volt d.c. circuits, if circuit is broken before plug is withdrawn.

Z Series Condulets

Schedule CR

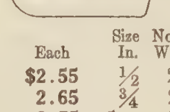
For Cutouts and Switches

A condulet combining a switch and cutout is desirable for the control of small motors where a starting box or compensator is not required, and for independent control and protection of certain lighting, heater and other special circuits.

Takes round base wiring devices and main line fuse cutouts. Furnished with sheet steel door, adjustable bar, adapting rings and cutout fastening plate. Round base wiring devices are mounted on the sloping surface. The cutout is mounted on a fastening plate which can be removed for installing the cutout and making the electrical connections. The hubs are cast solid with the body and have an integral bushing and tapered thread.

Type Z

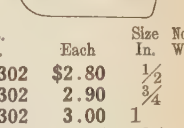
30-Ampere, 250-Volt



Cat. No.	Each	Size In.	No. of Wires	Std. Pkg.
Z1302	$2.55	½	2	15
Z2302	2.65	¾	2	15
Z3302	2.75	1	2	10
Z1303	3.00	½	3	15
Z2303	3.10	¾	3	15
Z3303	3.20	1	3	10
30-Ampere, 600-Volt				
Z13016	$4.30	½	1	15
Z23016	4.40	¾	1	15
Z33016	4.50	1	1	10
Z33036	7.95	1	3	10
......	....	.	.	..

Type ZC

30-Ampere, 250-Volt



Cat. No.	Each	Size In.	No. of Wires	Std. Pkg.
ZC1302	$2.80	½	2	15
ZC2302	2.90	¾	2	15
ZC3302	3.00	1	2	10
ZC1303	3.25	½	3	15
ZC2303	3.35	¾	3	15
ZC3303	3.45	1	3	10
30-Ampere, 600-Volt				
ZC13016	$4.60	½	1	15
ZC23016	4.70	¾	1	15
ZC33016	4.80	1	1	10
ZC13036	8.00	½	3	15
ZC23036	8.10	¾	3	15

YK Series Condulets

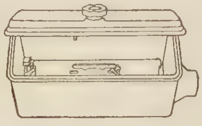
Schedule CR

For Fusible Knife Switches

Furnished with switch fastening plate which permits mounting the switch and making connections before it is installed in Condulet. Door is furnished with spring catch. Hubs are cast solid with body and have integral bushing and tapered thread.

Cadmium-galvanized is the standard finish.

Type YK Condulets



With Sheet Steel Door

30 Amperes, 250 Volts

Size Inches	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	10	YK1302	$4.00	YK1303	$6.20
¾	10	YK2302	4.10	YK2303	6.30
1	10	YK3302	4.20	YK3303	6.40
1¼	10	YK4302	4.30	YK4303	6.50
1½	10	YK5302	4.40	YK5303	6.60
With Cast Feraloy Door — 60 Amperes, 250 Volts					
¾	10	YK2602	$11.40	YK2603	$12.30
1	10	YK3602	11.50	YK3603	12.40
1¼	10	YK4602	11.60	YK4603	12.50
1½	10	YK5602	11.70	YK5603	12.60
2	10	YK6602	11.80	YK6603	12.70

Type YKC Condulets

Schedule CR

With Sheet Steel Door

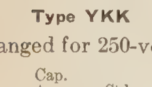
30 Amperes, 250 Volts

Size Inches	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	10	YKC1302	$4.15	YKC1303	$6.35
¾	10	YKC2302	4.30	YKC2303	6.50
1	10	YKC3302	4.45	YKC3303	6.65
1¼	10	YKC4302	4.60	YKC4303	6.80
1½	10	YKC5302	4.75	YKC5303	6.95
With Cast Feraloy Door — 60 Amperes, 250 Volts					
¾	10	YKC2602	$11.60	YKC2603	$12.50
1	10	YKC3602	11.75	YKC3603	12.65
1¼	10	YKC4602	11.90	YKC4603	12.80
1½	10	YKC5602	12.05	YKC5603	12.95
2	10	YKC6602	12.20	YKC6603	13.10

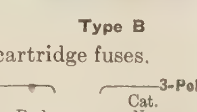
Knife Switches

Schedule CR

For Condulets of the YK and YKW Series



Type YKK



Type B

Arranged for 250-volt, N.E.C. cartridge fuses.

Type	Cap. Amperes	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
YKK	30	10	YKK302	$2.35	YKK303	$3.75
YKK	60	10	YKK602	3.50	YKK603	5.25
B	100	..	*31364	....	*31484	....
B	200	..	*31366	....	*31486	....

*Specify high clips when ordering. Prices on application.

YKW Series Condulets

Schedule CR

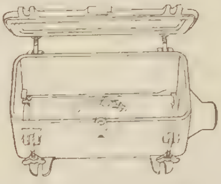
For Fusible Knife Switches

A cast feraloy door, tubular gasket, cemented in a groove, adjustable hinges, and an eyebolt and wing nut fastening device, make the condulet watertight.

Condulets for 30 or 60-ampere switches furnished with switch fastening plate; for 100 or 200-ampere switches, with screws for fastening switch directly to condulet.

Cadmium-galvanized is the standard finish.

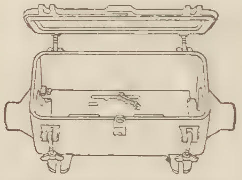
Type YKW Condulets



30 Amperes, 250 Volts

Size Inches	Std Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	10	YKW1302	$9.60	YKW1303	$10.50
¾	10	YKW2302	9.70	YKW2303	10.60
1	10	YKW3302	9.80	YKW3303	10.70
1¼	10	YKW4302	9.90	YKW4303	10.80
1½	10	YKW5302	10.00	YKW5303	10.90
60 Amperes, 250 Volts					
¾	10	YKW2602	$12.50	YKW2603	$14.50
1	10	YKW3602	12.60	YKW3603	14.60
1¼	10	YKW4602	12.70	YKW4603	14.70
1½	10	YKW5602	12.80	YKW5603	14.80
2	10	YKW6602	12.90	YKW6603	14.90
100 Amperes, 250 Volts					
1	5	YKW31002	$23.00	....	.....
1¼	5	YKW41002	23.15	YKW41003	$26.90
1½	5	YKW51002	23.30	YKW51003	27.05
2	5	YKW61002	23.45	YKW61003	27.20
2½	5	....	.....	YKW71003	27.35
200 Amperes, 250 Volts					
1½	5	YKW52002	$35.15	YKW52003	$46.80
2	5	YKW62002	35.35	YKW62003	47.00
2½	5	YKW72002	35.55	YKW72003	47.20
3	5	YKW82002	35.75	YKW82003	47.40

Type YKWC Condulets



30 Amperes, 250 Volts

Size Inches	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
½	10	YKWC1302	$9.75	YKWC1303	$10.65
¾	10	YKWC2302	9.90	YKWC2303	10.80
1	10	YKWC3302	10.05	YKWC3303	10.95
1¼	10	YKWC4302	10.20	YKWC4303	11.10
1½	10	YKWC5302	10.35	YKWC5303	11.25
60 Amperes, 250 Volts					
¾	10	YKWC2602	$12.70	YKWC2603	$14.70
1	10	YKWC3602	12.85	YKWC3603	14.85
1¼	10	YKWC4602	13.00	YKWC4603	15.00
1½	10	YKWC5602	13.15	YKWC5603	15.15
2	10	YKWC6602	13.30	YKWC6603	15.30
100 Amperes, 250 Volts					
1	5	YKWC31002	$23.25	....	.....
1¼	5	YKWC41002	23.45	YKWC41003	$27.20
1½	5	YKWC51002	23.65	YKWC51003	27.40
2	5	YKWC61002	23.85	YKWC61003	27.80
2½	5	....	.....	YKWC71003	27.80
200 Amperes, 250 Volts					
1½	5	YKWC52002	$35.50	YKWC52003	$47.15
2	5	YKWC62002	35.75	YKWC62003	47.40
2½	5	YKWC72002	36.00	YKWC72003	47.65
3	5	YKWC82002	36.25	YKWC82003	47.90

FA Series Safety Switch Condulets

Schedule CR

2-Pole—30-Ampere, 250-Volt or 5-Ampere, 600-Volt

3-Way—20-Ampere, 125-Volt or 10-Ampere, 250-Volt

These Condulets are furnished with Crouse-Hinds tumbler switch, cover and gasket, and are for use in industrial plants or wherever switches would be subjected to unusually severe conditions. The switches are enclosed in Condulets and are externally operated, affording the switch maximum protection.

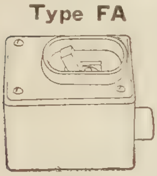
Watertight covers are especially adapted for use out-of-doors or wherever dust, moisture, or gases are present. They have a handle for external operation of the switch.

The non-watertight cover has a rim to protect switch handle which projects through a slot in cover. Handle is self-indicating (furnished with luminous finder at 50c extra).

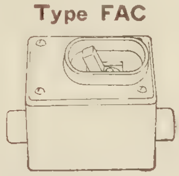
Cadmium-galvanized is the standard finish.

With Guarded Cover

Type FA



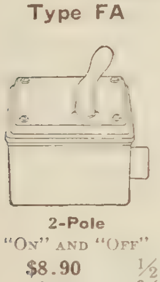
Type FAC



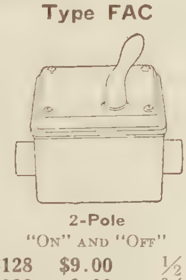
Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
2-Pole "On" and "Off"				**2-Pole "On" and "Off"**			
FA129	$6.25	½	10	FAC129	$6.35	½	10
FA229	6.35	¾	10	FAC229	6.45	¾	10
FA329	6.45	1	10	FAC329	6.55	1	10
3-Way "On" and "Off"				**3-Way "On" and "Off"**			
FA169	$6.50	½	10	FAC169	$6.60	½	10
FA269	6.60	¾	10	FAC269	6.70	¾	10
FA369	6.70	1	10	FAC369	6.80	1	10

With Watertight Cover

Type FA



Type FAC



Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
2-Pole "On" and "Off"				**2-Pole "On" and "Off"**			
FA128	$8.90	½	10	FAC128	$9.00	½	10
FA228	9.00	¾	10	FAC228	9.10	¾	10
FA328	9.10	1	10	FAC328	9.20	1	10
3-Way "On" and "Off"				**3-Way "On" and "Off"**			
FA168	$9.15	½	10	FAC168	$9.25	½	10
FA268	9.25	¾	10	FAC268	9.35	¾	10
FA368	9.35	1	10	FAC368	9.45	1	10

With Watertight Cover
Momentary Contact, Self-Restoring Switch

Type FA				Type FAC			
2-Pole Normally "On"				**2-Pole Normally "On"**			
FA126	$8.90	½	10	FAC126	$9.00	½	10
FA226	9.00	¾	10	FAC226	9.10	¾	10
FA326	9.10	1	10	FAC326	9.20	1	10
Normally "Off"				**Normally "Off"**			
FA127	$8.90	½	10	FAC127	$9.00	½	10
FA227	9.00	¾	10	FAC227	9.10	¾	10
FA327	9.10	1	10	FAC327	9.20	1	10
3-Way Normally "On"				**3-Way Normally "On"**			
FA167	$9.15	½	10	FAC167	$9.25	½	10
FA267	9.25	¾	10	FAC267	9.35	¾	10
FA367	9.35	1	10	FAC367	9.45	1	10

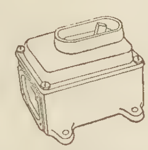
FA Series Safety Switch Condulets without Hub Plates

Schedule CR

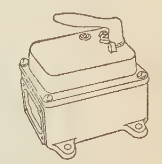
Take conduit hub plates. Furnished with Crouse-Hinds tumbler switch, cover, and gaskets.

Cadmium-galvanized is the standard finish.

3-Pole Type FA
Takes YYP7 Conduit Hub Plates



With Guarded Cover



With Watertight Cover

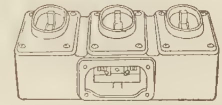
3-Pole, 30-Ampere, 250-Volt or 5-Ampere, 600 Volt

Cat. No.	Each	Style	Std. Pkg.
FA7739	$12.00	With Guarded Cover.............	5
FA7738	15.50	With Watertight Cover..........	5
		With Momentary Contact Self-Restoring, Watertight Cover:	
FA7736	15.50	Switch Normally "On".......	5
FA7737	15.50	Switch Normally "Off"......	5

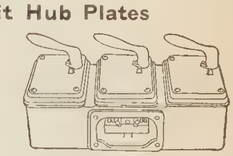
2-Gang
Takes YYP8 Conduit Hub Plates

2-Pole, 30-Ampere, 250-Volt or 5-Ampere, 600-Volt			
FA88292	$12.50	With Guarded Covers............	5
FA88282	16.00	With Watertight Covers..........	5
		With Momentary Contact, Self-Restoring, Watertight Covers:	
FA88262	16.00	Switch Normally "On".......	5
FA88272	16.00	Switch Normally "Off"......	5
3-Way, 20-Ampere, 125-Volt or 10-Ampere, 250-Volt			
FA88692	$13.00	With Guarded Covers............	5
FA88682	16.50	With Watertight Covers..........	5
FA88672	16.50	With Momentary Contact, Self-Restoring, Watertight Cover...	5

3-Gang
Takes YYP8 Conduit Hub Plates



With Guarded Covers



With Watertight Covers

2-Pole, 30-Ampere, 250-Volt or 5-Ampere, 600-Volt			
FA88293	$17.50	With Guarded Covers............	3
FA88283	22.25	With Watertight Covers..........	3
		With Momentary Contact, Self-Restoring, Watertight Covers:	
FA88263	22.25	Switch Normally "On".......	3
FA88273	22.25	Switch Normally "Off"......	3
3-Way, 20-Ampere, 125-Volt or 10-Ampere, 250-Volt			
FA88693	$18.25	With Guarded Covers............	3
FA88683	23.00	With Watertight Covers..........	3
FA88673	23.00	With Momentary Contact, Self-Restoring, Watertight Covers...	3

4-Gang
Takes YYP8 Conduit Hub Plates

2-Pole, 30-Ampere, 250-Volt or 5-Ampere, 600-Volt			
FA88294	$25.00	With Guarded Covers............	2
FA88284	31.00	With Watertight Covers..........	2
		With Momentary Contact, Self-Restoring, Watertight Covers:	
FA88264	31.00	Switch Normally "On".......	2
FA88274	31.00	Switch Normally "Off"......	2
3-Way, 20-Ampere, 125-Volt or 10-Ampere, 250-Volt			
FA88694	$26.00	With Guarded Covers............	2
FA88684	32.00	With Watertight Covers..........	2
FA88674	32.00	With Momentary Contact, Self-Restoring, Watertight Covers...	2

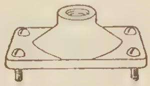
YYP7 and YYP8 Series Conduit Hub Plates

Schedule CR

For Condulets of the FA Series

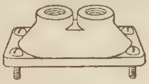
Cast feraloy. Cadmium-galvanized is the standard finish.

With One Hub Straight



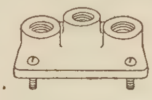
Size In.	Std. Pkg.	YYP7 Series 2¾x4½ Inches Cat. No.	Each	YYP8 Series 3¼x4⅝ Inches Cat. No.	Each
½	15	YYP71	$.45	YYP81	$.55
¾	15	YYP72	.55	YYP82	.65
1	15	YYP73	.65	YYP83	.75
1¼	15	YYP74	.75	YYP84	.85
1½	15	YYP75	.85	YYP85	.95
2	15	YYP76	.95	YYP86	1.05
2½	15	....	...	YYP87	1.15

With Two Hubs Straight



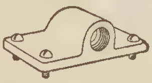
½	15	YYP711	$.60	YYP811	$.70
¾	15	YYP722	.70	YYP822	.80
1	15	YYP733	.80	YYP833	.90
1¼	15	YYP744	.90	YYP844	1.00

With Three Hubs Straight



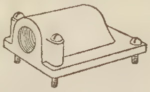
½	15	....	...	YYP8111	$.85
¾	15	....	...	YYP8222	.95

With One Hub 90° Back or Front



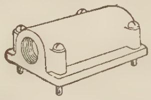
½	15	YYAP71	$.55	YYAP81	$.65
¾	15	YYAP72	.65	YYAP82	.75
1	15	YYAP73	.75	YYAP83	.85
1¼	15	YYAP74	.85	YYAP84	.95
1½	15	YYAP75	.95	YYAP85	1.05
2	15	....	...	YYAP86	1.15

With One Hub 90° Left or Right



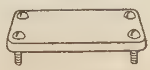
½	15	YYLP71	$.55	YYLP81	$.65
¾	15	YYLP72	.65	YYLP82	.75
1	15	YYLP73	.75	YYLP83	.85
1¼	15	YYLP74	.85	YYLP84	.95
1½	15	YYLP75	.95	YYLP85	1.05
2	15	....	...	YYLP86	1.15

With Two Hubs 90° Left and Right



½	15	YYSP71	$.60	YYSP81	$.70
¾	15	YYSP72	.70	YYSP82	.80
1	15	YYSP73	.80	YYSP83	.90
1¼	15	YYSP74	.90	YYSP84	1.00
1½	15	YYSP75	1.00	YYSP85	1.10
2	15	....	....	YYSP86	1.20

Blank

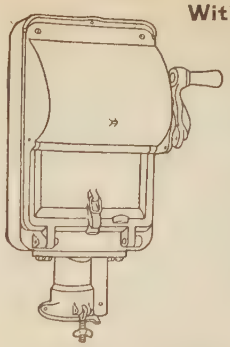


...	15	YYP700	$.30	YYP800	$.40

Type MKS Interlocking Safety Switches and Plug Receptacle Condulets

Schedule CR

Without Hub Plates



For use with portable electrical appliances such as welding machines, rivet heaters, motor-driven machines, or for similar purposes where switches and plugs are used.

Consists of a safety switch and a plug receptacle. The receptacle and switch are so interlocked that the plug cannot be withdrawn unless the switch is open, nor can the switch be closed unless the plug is fully inserted.

Takes conduit hub plates and Type DP Interlocking Plugs.

Furnished with fusible knife switch and interlocking plug receptacle with spring door housing.

These condulets are not weather proof. When installed out-of-doors or where exposed to the weather, a weatherproof housing should be built around the condulet.

Cadmium-galvanized is the standard finish.

Switch Arranged for Plug Fuses

Cat. No.	Each	Rating Amp.	Rating Volt	No. of Poles	Std. Pkg.
MKS16328	$35.00	30	125	2	5
MKS16338	38.60	30	125	3	5
Switch Arranged for Cartridge Fuses					
MKS1632	$35.00	30	250	2	5
MKS1633	38.60	30	250	3	5
MKS16335	53.20	30	500 A.C.	3	1
MKS1662	43.00	60	250	2	1
MKS1663	47.20	60	250	3	1
MKS16635	53.20	60	500 A.C.	3	1
MKS16102	78.00	100	250	2	1
MKS16103	89.30	100	250	3	1
MKS161035	92.90	100	500 A.C.	3	1
MKS16202	103.60	200	250	2	1
MKS16203	122.90	200	250	3	1
MKS162035	128.40	200	500 A.C.	3	1
***2-Pole Switch with 3-Pole Receptacle**					
MKS16323	$36.00	30	250	2	5
MKS16623	44.00	60	250	2	1
MKS161023	80.70	100	250	2	1
MKS162023	106.60	200	250	2	1

*For use where Style 2 method of grounding is required.

If specified on the order, can be furnished without spring door at the following reductions in prices: 30 ampere, 125 or 250-volt, $1.25; 30-ampere, 500-volt a.c., $1.75; 60-ampere, $1.75; 100-ampere, $2.50; 200-ampere, $3.50.

Conduit Hub Plates

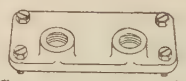
Schedule CR

Cast feraloy; cadmium-galvanized finish.

MF Series—2¾x6⅛ Inches

For 60, 100 and 200-Ampere, 250-Volt, and All 500 Volt A.C. Condulets of the MKS Series

One Hub / **Two Hubs**



Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
MF1	$.95	½	15	MF11	$1.10	½	15
MF2	1.05	¾	15	MF22	1.20	¾	15
MF3	1.15	1	15	MF33	1.30	1	15
MF4	1.25	1¼	15	MF44	1.40	1¼	15
MF5	1.35	1½	15	MF55	1.50	1½	15
MF6	1.45	2	15	MF66	1.60	2	15
MF7	3.10	2½	15	MF77	3.35	2½	15
MF8	3.20	3	15	......	....	...	..
MF9	3.30	3½	15	......	....	...	..

MK Series—2$\frac{5}{16}$x5 Inches

For 30-Ampere, 125 and 250-Volt Condulets of the MKS Series

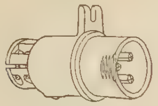
One Hub				Two Hubs			
MK1	$.45	½	15	MK11	$.60	½	15
MK2	.55	¾	15	MK22	.70	¾	15
MK3	.65	1	15	MK33	.80	1	15
MK4	.75	1¼	15	MK44	.90	1¼	15
MK5	.85	1½	15	MK55	1.00	1½	15

Type DP Interlocking Plugs

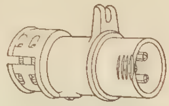
Schedule CR

For Type MKS Condulets

Furnished with clamp for cord, cable, flexible conduit or armored conductor. Has aluminum handles. Aluminum is standard finish.

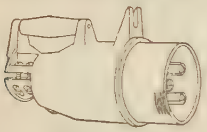


30 to 100-Ampere
For Small Cable

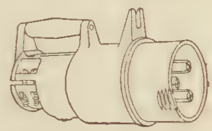


30 to 100-Ampere
For Large Cable

Rating Amp.	Rating Volt	Outside *Diameter Inches	Std. Pkg.	2-Pole Cat. No.	2-Pole Each	3-Pole Cat. No.	3-Pole Each
30	†250	.500 to .875	5	DP132	$6.50	DP133	$7.00
30	†250	.750 to 1.188	5	DP332	6.50	DP333	7.00
30	500 AC	.750 to 1.188	5	....	.....	DP1635	8.00
30	500 AC	1.188 to 1.813	5	....	.....	DP3635	8.00
60	250	.750 to 1.188	5	DP162	7.50	DP163	8.00
60	250	1.188 to 1.813	5	DP362	7.50	DP363	8.00
60	500 AC	.750 to 1.188	5	....	.....	DP1635	8.00
60	500 AC	1.188 to 1.813	5	....	.....	DP3635	8.00
100	250	.938 to 1.469	1	DP1102	20.00	DP1103	22.00
100	250	1.313 to 2.063	1	DP3102	20.00	DP3103	22.00
100	500 AC	.938 to 1.469	1	....	.....	DP11035	22.00
100	500 AC	1.313 to 2.063	1	....	.....	DP31035	22.00



200-Ampere
For Small Cable



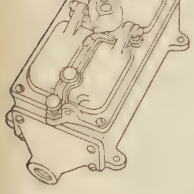
200-Ampere
For Large Cable

200	250	1.188 to 1.813	1	DP1202	$45.00	DP1203	$50.00
200	250	1.750 to 2.563	1	DP3202	45.00	DP3203	50.00
200	500 AC	1.188 to 1.813	1	....	.....	DP12035	50.00
200	500 AC	1.750 to 2.563	1	....	.....	DP32035	50.00

*Diameter of cable, flexible conduit or armored conductor.

†Use 250-volt plugs with 125-volt receptacles.

Type ZT Safety Switch Condulets



Schedule CR

Without Hub Plates

Type ZT is watertight. Cadmium-galvanized is the standard finish.

Takes YYP7 Series Conduit Hub Plates.

Furnished with tumbler switch and gasketed cover with fuse door.

Standard package quantity is 5.

Cat. No.	Each	Maximum Amperes Non-Inductive	Maximum H.P. Motor	No. of Poles	Maximum Line Voltage	No. of Protective Devices
ZT 12	$20.00	30	*3 D.C., ¾ A.C.	2	125	**2
ZT 13	25.00	30	1½	3	125	**3
ZT 22	20.00	30	*5 D.C., 2 A.C.	2	250	†2
ZT 23	25.00	30	2	3	250	†3
ZT235	30.00	30	2	3	500 A.C.	‡3
ZT237	30.00	20	2	3	600 A.C.	‡3
ZT 32	20.00	30	5	2	250	§1
ZT 33	25.00	30	5	3	250	§2
ZT325	20.00	30	5	2	500 A.C.	§1
ZT335	25.00	30	5	3	500 A.C.	§2
ZT327	20.00	20	5	2	600 A.C.	§1
ZT337	25.00	20	5	3	600 A.C.	§2
ZT326	20.00	5	2	2	600 D.C.	§1
ZT 43	25.00	30	5	3	250	°2
ZT435	25.00	30	5	3	500 A.C.	°2
ZT437	25.00	20	5	3	600 A.C.	°2

*Maximum h.p. when used with d.c. starting box.

**Plug fuses.

†250-volt cartridge fuses.

‡600-volt cartridge fuses.

§Westinghouse plug type thermal cutouts.

°General Electric thermal cutouts.

If specified on the order, Type ZT can be furnished with a key-operated interlock release at $2.50 extra.

AL Series Fixture Hanger Condulets

Schedule CR

For Pendent Fixtures—Always Hang Plumb

For Fixtures with ½-Inch Stem

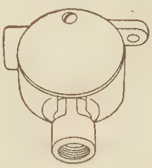
These condulets provide a flexible suspension for electrical fixtures. Fixtures are suspended from a universal joint which assures that fixture will hang plumb. It also prevents breaking fixture stem at point of suspension. This universal joint permits fixture to swing through an angle of about 20° in any direction from the perpendicular.

The cushion fixture hanger is provided with a spring which carries the weight of the fixture and absorbs any shocks due to vibration or other causes.

Standard finish is cadmium-galvanized. In this finish, which does not interrupt safety circuit (ground) between body and pendent, flexible fixture hangers are N.E.C. standard.

ALA Ball Fixture Hangers

Cat. No.	Each	Size In.	Fixture Wt., Lbs.	Std. Pkg.
ALA1	$.65	½	....	25
ALA21	.75	¾	....	25



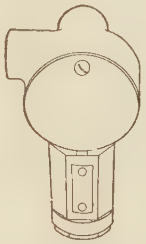
Type ALA Ball Fixture Hanger

ALA Cushion Fixture Hangers

ALA14	$1.40	½	3 to 6	25
ALA214	1.50	¾	3 to 6	25
ALA18	1.40	½	6 to 12	25
ALA218	1.50	¾	6 to 12	25
ALA116	1.40	½	12 to 24	25
ALA2116	1.50	¾	12 to 24	25

ALL Ball Fixture Hangers

ALL1	$.75	½	....	25
ALL21	.85	¾	....	25



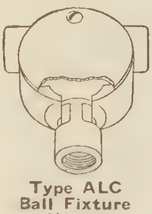
Type ALL Cushion Fixture Hanger

ALL Cushion Fixture Hangers

ALL14	$1.50	½	3 to 6	25
ALL214	1.60	¾	3 to 6	25
ALL18	1.50	½	6 to 12	25
ALL218	1.60	¾	6 to 12	25
ALL116	1.50	½	12 to 24	25
ALL2116	1.60	¾	12 to 24	25

ALC Ball Fixture Hangers

ALC1	$.75	½	....	25
ALC21	.85	¾	....	25
ALC31	.95	1	....	10



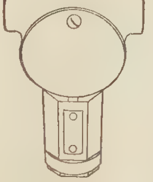
Type ALC Ball Fixture Hanger

ALC Cushion Fixture Hangers

ALC14	$1.50	½	3 to 6	25
ALC214	1.60	¾	3 to 6	25
ALC314	1.70	1	3 to 6	10
ALC18	1.50	½	6 to 12	25
ALC218	1.60	¾	6 to 12	25
ALC318	1.70	1	6 to 12	10
ALC116	1.50	½	12 to 24	25
ALC2116	1.60	¾	12 to 24	25
ALC3116	1.70	1	12 to 24	10

ALT Ball Fixture Hangers

ALT1	$.85	½	....	25
ALT21	.95	¾	....	25
ALT31	1.05	1	....	10



Type ALT Cushion Fixture Hanger

ALT Cushion Fixture Hangers

ALT14	$1.60	½	3 to 6	25
ALT214	1.70	¾	3 to 6	25
ALT314	1.80	1	3 to 6	10
ALT18	1.60	½	6 to 12	25
ALT218	1.70	¾	6 to 12	25
ALT318	1.80	1	6 to 12	10
ALT116	1.60	½	12 to 24	25
ALT2116	1.70	¾	12 to 24	25
ALT3116	1.80	1	12 to 24	10

AL Series Threadless Flexible Fixture Hanger Condulets

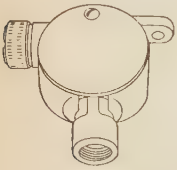
Schedule CR

For Pendent Fixtures—Always Hang Plumb

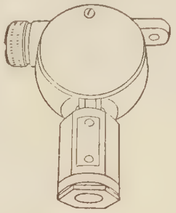
These condulets provide a flexible suspension for electric fixtures. Fixtures are suspended from a universal joint which assures that the fixture will hang plumb. It also prevents breaking fixture stem at point of suspension. This universal joint permits fixture to swing through an angle of about 20° in any direction from the perpendicular.

Standard finish, cadmium-galvanized. In this finish, which does not interrupt safety circuit (ground) between body and pendent, fixture hangers are N.E.C. standard.

Type ALA



Ball

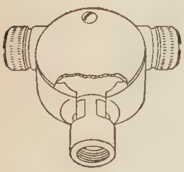


Cushion

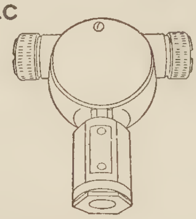
Ball Hangers

Size, In. (Pendent Size, Given Last)	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
½–½	25	ALA19	$.70	ALA15	$.70
¾–½	25	ALA219	.85	ALA215	.85
¾–¾	25	ALA229	.95	ALA225	.95
Cushion Hangers					
For Fixtures Weighing 3 to 6 Pounds					
½–½	25	ALA194	$1.45	ALA154	$1.45
¾–½	25	ALA2194	1.60	ALA2154	1.60
¾–¾	25	ALA2294	1.70	ALA2254	1.70
For Fixtures Weighing 6 to 12 Pounds					
½–½	25	ALA198	$1.45	ALA158	$1.45
¾–½	25	ALA2198	1.60	ALA2158	1.60
¾–¾	25	ALA2298	1.70	ALA2258	1.70
For Fixtures Weighing 12 to 24 Pounds					
½–½	25	ALA1916	$1.45	ALA1516	$1.45
¾–½	25	ALA21916	1.60	ALA21516	1.60
¾–¾	25	ALA22916	1.70	ALA22516	1.70

Type ALC



Ball



Cushion

Ball Hangers

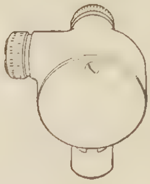
Size, In. (Pendent Size, Given Last)	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
½–½–½	25	ALC19	$.85	ALC15	$.85
¾–¾–½	25	ALC219	1.05	ALC215	1.05
1 –1 –½	10	ALC319	1.25	ALC315	1.25
¾–¾–¾	25	ALC229	1.15	ALC225	1.15
1 –1 –¾	10	ALC329	1.35	ALC325	1.35
Cushion Hangers					
For Fixtures Weighing 3 to 6 Pounds					
½–½–½	25	ALC194	$1.60	ALC154	$1.60
¾–¾–½	25	ALC2194	1.80	ALC2154	1.80
1 –1 –½	10	ALC3194	2.00	ALC3154	2.00
¾–¾–¾	25	ALC2294	1.90	ALC2254	1.90
1 –1 –¾	10	ALC3294	2.10	ALC3254	2.10
For Fixtures Weighing 6 to 12 Pounds					
½–½–½	25	ALC198	$1.60	ALC158	$1.60
¾–¾–½	25	ALC2198	1.80	ALC2158	1.80
1 –1 –½	10	ALC3198	2.00	ALC3158	2.00
¾–¾–¾	25	ALC2298	1.90	ALC2258	1.90
1 –1 –¾	10	ALC3298	2.10	ALC3258	2.10
For Fixtures Weighing 12 to 24 Pounds					
½–½–½	25	ALC1916	$1.60	ALC1516	$1.60
¾–¾–½	25	ALC21916	1.80	ALC21516	1.80
1 –1 –½	10	ALC31916	2.00	ALC31516	2.00
¾–¾–¾	25	ALC22916	1.90	ALC22516	1.90
1 –1 –¾	10	ALC32916	2.10	ALC32516	2.10

AL Series Threadless Flexible Fixture Hanger Condulets

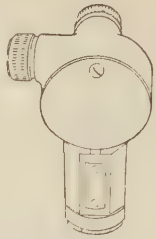
Schedule CR

For Pendent Fixtures—Always Hang Plumb

Type ALL



Ball

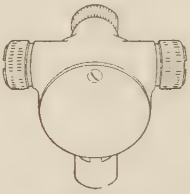


Cushion

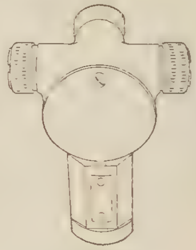
Ball Hangers

Size, In. (Pendent Size, Given Last)	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
½–½–½	25	ALL19	$.85	ALL15	$.85
¾–¾–½	25	ALL219	1.05	ALL215	1.05
¾–¾–¾	25	ALL229	1.15	ALL225	1.15
Cushion Hangers					
For Fixtures Weighing 3 to 6 Pounds					
½–½–½	25	ALL194	$1.60	ALL154	$1.60
¾–¾–½	25	ALL2194	1.80	ALL2154	1.80
¾–¾–¾	25	ALL2294	1.90	ALL2254	1.90
For Fixtures Weighing 6 to 12 Pounds					
½–½–½	25	ALL198	$1.60	ALL158	$1.60
¾–¾–½	25	ALL2198	1.80	ALL2158	1.80
¾–¾–¾	25	ALL2298	1.90	ALL2258	1.90
For Fixtures Weighing 12 to 24 Pounds					
½–½–½	25	ALL1916	$1.60	ALL1516	$1.60
¾–¾–½	25	ALL21916	1.80	ALL21516	1.80
¾–¾–¾	25	ALL22916	1.90	ALL22516	1.90

Type ALT



Ball



Cushion

Ball Hangers

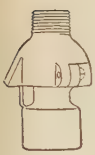
Size, In. (Pendent Size, Given Last)	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
½–½–½–½	25	ALT19	$1.00	ALT15	$1.00
¾–¾–¾–½	25	ALT219	1.25	ALT215	1.25
1– 1– 1–½	10	ALT319	1.50	ALT315	1.50
¾–¾–¾–¾	25	ALT229	1.35	ALT225	1.35
1 1 1–¾	10	ALT329	1.60	ALT325	1.60
Cushion Hangers					
For Fixtures Weighing 3 to 6 Pounds					
½–½–½–½	25	ALT194	$1.75	ALT154	$1.75
¾ ¾ ¾ ½	25	ALT2194	2.00	ALT2154	2.00
1– 1– 1–½	10	ALT3194	2.25	ALT3154	2.25
¾–¾–¾–¾	25	ALT2294	2.10	ALT2254	2.10
1– 1– 1–¾	10	ALT3294	2.35	ALT3254	2.35
For Fixtures Weighing 6 to 12 Pounds					
½–½–½–½	25	ALT198	$1.75	ALT158	$1.75
¾–¾–¾–½	25	ALT2198	2.00	ALT2158	2.00
1– 1– 1–½	10	ALT3198	2.25	ALT3158	2.25
¾–¾–¾–¾	25	ALT2298	2.10	ALT2258	2.10
1– 1– 1–¾	10	ALT3298	2.35	ALT3258	2.35
For Fixtures Weighing 12 to 24 Pounds					
½–½–½–½	25	ALT1916	$1.75	ALT1516	$1.75
¾–¾–¾–½	25	ALT21916	2.00	ALT21516	2.00
1– 1– 1–½	10	ALT31916	2.25	ALT31516	2.25
¾–¾–¾–¾	25	ALT22916	2.10	ALT22516	2.10
1– 1– 1–¾	10	ALT32916	2.35	ALT32516	2.35

Ball and Cushion Fixture Hangers

Schedule CR

Type UNJ Ball Fixture Hangers

For Pendent Fixtures—Always Hang Plumb

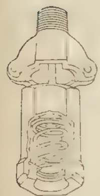


Cat. No.	Each	Size Inches	Std. Pkg.
UNJ1308	$.65	*½—⅜	50
UNJ1	.65	½—½	50
UNJ2308	.75	*¾—⅜	50
UNJ21	.75	*¾—½	50
UNJ2	.75	¾—¾	50

*Male threads given first.

Type UNJC Cushion Fixture Hangers

For Pendent Fixtures

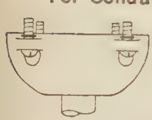


Type UNJC is provided with a spring which carries the weight of the fixture and absorbs any shocks due to vibration or other causes. Has cadmium-galvanized finish.

Cat. No.	Each	Size Inches	Total Wt. of Fixture, Lbs.	Std. Pkg.
UNJC12	$1.35	½—½	1½ to 3	50
UNJC14	1.35	½—½	3 to 6	50
UNJC18	1.35	½—½	6 to 12	50
UNJC116	1.35	½—½	12 to 24	50

Type GS Ball Fixture Hangers

For Condulets of the GS Series—Always Hang Plumb



For Form 5 Condulets

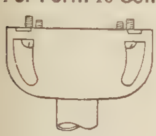
For Fixtures with ½-Inch Stem

Cat. No.	Each	Std. Pkg.
GS536	$.55	25

Type H Cushion Fixture Hangers

Always Hang Plumb

For Form 10 Condulets of the G-H Series—Without Adjustable Bar

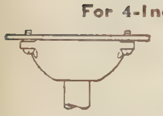


For Fixtures with ½-Inch Stem

Cat. No.	Each	Total Wt. of Fixture, Lbs.	Std. Pkg. Asst'd
H1064	$.65	2 to 4	25
H1066	.65	4 to 8	25
H1067	.65	8 to 16	25
H1068	.65	16 to 30	25

Type ARB Ball Fixture Hangers

For 4-Inch Outlet Boxes—Always Hang Plumb



For Fixtures with ½-Inch Stem

Cat. No.	Each	Std. Pkg.
ARB6	$1.00	25

Type ARB Cushion Fixture Hangers

For 4-Inch Outlet Boxes—Always Hang Plumb

For Fixtures with ½-Inch Stem

Cat. No.	Each	Total Wt. of Fixture, Lbs.	Std. Pkg. Asst'd
ARB14	$1.00	2 to 4	25
ARB 8	1.00	4 to 8	25
ARB10	1.00	8 to 16	25
ARB12	1.00	16 to 30	25

Type UCY Threaded Fixture Rings

Schedule CR

For Use with Threadless Condulets

Thick Wall

The Type UCY Threaded Fixture Ring not only provides a secure suspension for fixtures, but also makes possible a combination of threadless and threaded hubs in the same condulet. The fixture ring takes the place of the grip ring in the threadless condulet hub, and is secured by the knurled nut.

Cadmium-galvanized is the standard finish.

Cat. No.	Each	Size Inches	Std. Pkg.
UCY1	$.04	½	200
UCY2	.06	¾	100
UCY3	.08	1	50
UCY4	.15	1¼	25
UCY5	.30	1½	10
UCY6	.50	2	5

ET Series Condulets

Schedule CR

Single runs of conduit may be made from these junctions to the desired outlets, where the necessary taps and splices in the wires can be made. The hubs have an integral bushing and tapered thread.

Lugs are provided for anchoring to forms.

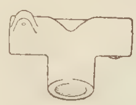
Where these condulets are not used, all conduits must be run to an accessible junction box or outlet. Where these condulets are used, junctions in the conduit system may be made at concealed or inaccessible points.

Type ET Short Radius Bend Condulets with lugs are required especially for installing LA Series Condulets in moving picture theatres having very shallow floors. Type ET Short Radius Bend Condulets without lugs are for use with outdoor meters where T connections are required to service conduit.

From the center line of the branch hub of the Type ETE Condulet to the surface wired over is 1⅞ inches. The purpose of this offset is to bring the branch hub of the Type ETE Condulet in line with the conduit outlet of certain meter boxes.

Cadmium-galvanized is the standard finish.

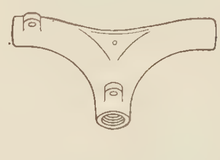
Type ET—Short Radius Bend



		With Lugs		Without Lugs	
Size Inches	Std. Pkg.	Cat. No.	Each	Cat. No.	Each
*¾-½-½	100	ET219	$.80	ET218	$.70
¾-¾-¾	100	ET229	.85	ET228	.75
*1-¾-¾	50	ET329	.90	ET328	.80
1-1-1	50	ET339	.95	ET338	.85
*1¼-1-1	25	ET439	1.05	ET438	.95

Type ET—Long Radius Bend

With Lugs



Size Inches	Std. Pkg.	Cat. No.	Each
½-½-½	50	ET1	$1.25
*¾-½-½	50	ET21	1.45
*1-½-½	50	ET31	1.55
*1-¾-¾	25	ET32	1.90
*1¼-1-1	25	ET43	2.30
1¼-1¼-1¼	10	ET4	2.65
*1½-1¼-1¼	10	ET54	2.95
*2-1¼-1¼	5	ET64	3.30
*2-1½-1½	5	ET65	3.75

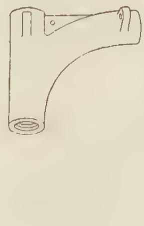
Type ETE—Offset Branch Hub

Without Lugs

Size Inches	Std. Pkg.	Cat. No.	Each
**1-¾-¾	50	ETE328	$.85
**1¼-1-1	25	ETE438	1.00
**1½-1¼-1¼	10	†ETE54	2.95

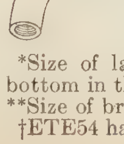
Type EY

With Lugs



Size Inches	Std. Pkg.	Cat. No.	Each
½ ½ ½	50	EY1	$1.05
*¾-½-½	50	EY21	1.15
*1 ½ ½	50	EY31	1.25
*1-¾-¾	25	EY32	1.45
*1¼-1-1	25	EY43	1.90
1¼-1¼-1¼	10	EY4	2.30
*1½-1¼-1¼	10	EY54	2.50
*2-1¼-1¼	5	EY64	2.70

Type ELB



½	50	ELB1	$.75
¾	50	ELB2	1.00
1	50	ELB3	1.25
1¼	25	ELB4	1.60
1½	10	ELB5	1.85

*Size of largest hub is given first and is shown at the bottom in the illustrations.

**Size of branch hub is given first.

†ETE54 has a large radius bend, same as ET54.

Groundulets

Schedule CM

Safety Circuit Equipment

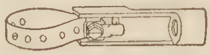
Cadmium-galvanized is the standard finish for groundulets.

Types GCA and GCD Groundulets are for making a thoroughly secure mechanical and electrical connection between a grounding conductor enclosed in conduit and a water pipe or other grounding electrode. At the same time the grounding conductor and its connections are fully protected from mechanical injury. The conduit itself, as well as the wire contained within it, are electrically connected to each other and to the water pipe.

Grounding electrode, ⅝ to 1 inch.

Type GCA

For Threaded Heavy Wall Conduit



Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Size Conduit Inches	Size Pipe In.	No. of Straps	Std. Pkg.	Carton
GCA172	$37.50	$46.90	$60.00	½	*½ to 2	1	25	5

Type GCD—With Angle Adjustment

For Threaded Heavy Wall Conduit

Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Size Conduit Inches	Size Pipe In.	No. of Straps	Std. Pkg.	Carton
GCD172	$37.50	$46.90	$60.00	½	*½ to 2	1	25	5
GCD22	85.00	106.25	136.00	¾	*½ to 2	2	20	5
GCD32	135.00	148.50	216.00	1	*½ to 2	3	10	5

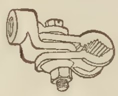
*For use also on lead pipe in sizes ½ and ¾-inch Grades AA and AAA, and 1-inch Grades A, AA and AAA.

Type GCH—With Angle Adjustment

Type GCH Groundulets are attached to a water pipe by rigid clamp jaws, insuring permanent and positive contact. A single substantial bolt holds the assembly in firm contact with both the water pipe and the grounding conductor.

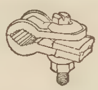
Grounding electrode, ½ to 1 inch.

For Threaded Heavy Wall Conduit



Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Size Conduit Inches	Size Pipe In.	No. of Straps	Std. Pkg.	Carton
GCH1	$37.50	$46.90	$60.00	½	½ to 1	..	25	5

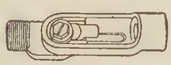
For No. 8 or No. 6 Bare Armored Ground Conduit



Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Size Conduit Inches	Size Pipe In.	No. of Straps	Std. Pkg.	Carton
GCH08	$26.25	$32.80	$42.00		½ to 1	..	25	5
For No. 4 Ground Conductor								
GCH91	$26.25	$32.80	$42.00	..	½ to 1	..	25	5

Type GCE—With Threaded Plug Terminal

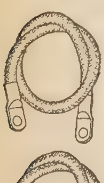
For Threaded Heavy Wall Conduit



For use where it is desired to have a threaded connection with the water pipe. Cast feraloy.

Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Size Conduit Inches	Size Pipe In.	No. of Straps	Std. Pkg.	Carton
GCE1472	$43.80	$48.20	$53.00	½	¾	..	50	10
GCE242	51.55	56.70	62.40	¾	¾	..	50	10
GCE342	59.25	65.15	71.65	1	¾	..	25	5

Groundulet Jumpers



For bonding from one conduit to another or from switch to conduit. Fit groundulet bushings ½ to 6 inches.

With 2 Soldering Lugs and No. 8 Jumper Cable

Cat. No.	Std. Pkg. Per 100	Less Std. Per 100	Length Cable In.	Std. Pkg.
GC808	$25.70	$28.65	8	100
GC812	32.90	36.70	12	100
With Soldering Stud, Lug and No. 8 Jumper Cable				
GC8108	$28.85	$32.20	8	100
GC8112	36.15	40.25	12	100

Groundulets

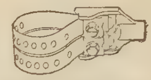
Schedule CM

Safety Circuit Equipment

Standard finish for groundulets, cadmium-galvanized

Type GC, for Open Ground Wire

With 1 Strap



With 2 Straps

Grounding electrode, ⅝ to 1 inch.
Cast brass; plain finish.

Cat. No.	Std. Pkg.	Carton	Less Carton	Size Pipe Inches	Size of Wire Lug	No. of Straps	Std. Pkg.	Carton
GC 91	$36.15	$39.75	$43.75	*½ to 1	No. 4	1	50	10
GC 92	41.25	45.40	49.95	*½ to 2	No. 4	1	50	10
GC922	82.45	90.70	99.80	*½ to 2	No. 00	2	25	5

Type GC Groundulet Water Meter Shunts

| ←23′→ |

Consists of two strap type Groundulets connected by 2 feet of No. 4, 40 per cent Copperweld Steel Jumper.

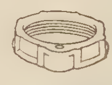
Other lengths furnished if specifically ordered.

Grounding electrode, ⅝ to 1 inch.

Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Size Pipe Inches	Std. Pkg.	Carton
GC191	$72.50	$90.65	$116.00	*½ to 1	25	10
GC192	85.65	107.05	137.00	*½ to 2	25	10

*For use also on lead pipe in sizes ½ and ¾-inch Grades AA and AAA, and 1-inch Grades A, AA and AAA.

Groundulet Bushings



Without Cap Screw, Lug, or Wire Clip

With Cap Screw and Wire Clip

With Cap Screw and Lug

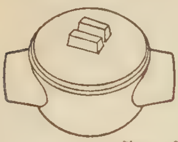
Size In.	Cat. No.	Per 100 Std. Pkg.	Per 100 Carton	Per 100 Less Carton	Std. Pkg.	Carton
Brass—Without Cap Screw, Lug or Wire Clip						
½	GC151	$5.30	$5.85	$6.45	100	25
¾	GC152	6.20	6.80	7.50	100	25
1	GC153	10.15	11.15	12.25	50	10
1¼	GC154	12.40	13.65	15.00	50	10
1½	GC155	16.15	17.75	19.50	50	10
2	GC156	23.90	26.30	28.95	25	5
2½	GC167	49.40	53.35	59.80	10	5
3	GC168	65.45	72.00	79.20	10	5
3½	GC169	124.70	137.20	137.20	5	1
4	GC1610	177.60	195.35	195.35	5	1
4½	GC1611	248.65	277.50	277.50	5	1
5	GC1612	300.20	300.20	300.20	1	1
6	GC1614	376.90	376.90	376.90	1	1
Brass—With Cap Screw and Wire Clip						
½	GC251	$9.40	$10.35	$15.00	100	25
¾	GC252	10.45	11.50	16.70	100	25
1	GC253	14.20	15.60	22.70	50	10
1¼	GC254	16.55	18.20	26.50	50	10
1½	GC255	20.30	22.35	32.50	50	10
Malleable—With Cap Screw and Wire Clip						
½	GC231	$4.94	$6.40	$7.90	100	25
¾	GC232	5.94	7.70	9.50	100	25
1	GC233	9.56	12.45	15.30	50	10
1¼	GC234	11.88	15.45	19.00	50	10
1½	GC235	16.25	21.15	26.00	50	10
Brass—With Cap Screw and Lug						
2	GC256	$31.50	$34.65	$50.40	25	5
2½	GC277	58.75	64.60	94.00	10	5
3	GC278	74.75	82.20	119.60	10	5
3½	GC279	133.50	146.85	146.85	5	1
4	GC2710	186.85	205.55	205.55	5	1
4½	GC2711	257.60	287.50	287.50	5	1
5	GC2712	309.15	309.15	309.15	1	1
6	GC2714	387.55	387.55	387.55	1	1
Malleable—With Cap Screw and Lug						
2	GC236	$23.75	$30.85	$38.00	25	5
2½	GC237	38.75	50.40	62.00	10	5
3	GC238	49.25	64.00	78.80	10	5
3½	GC239	87.50	113.75	113.75	5	1
4	GC240	122.50	159.25	159.25	5	1
4½	GC241	193.55	225.00	225.00	5	1
5	GC242	245.10	245.10	245.10	1	1
6	GC244	321.80	321.80	321.80	1	1

GR Series Junction Condulets

Furnished with screw cover.
Size condulet, form 4. Outside diameter, 2½ inches.
Cadmium-galvanized is the standard finish.

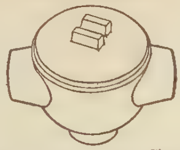
Schedule CR

Type GRC



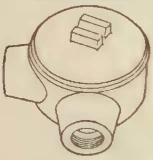
Cat. No.	Each	Size Hub, In.	Std. Pkg.
GRC14	$.95	½	25
GRC24	1.00	¾	25

Type GRCA



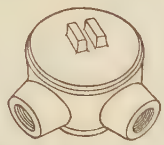
Cat. No.	Each	Size Hub, In.	Std. Pkg.
GRCA14	$1.00	½	25
GRCA24	1.05	¾	25

Type GRL



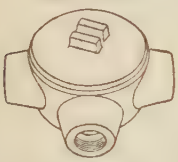
Cat. No.	Each	Size Hub, In.	Std. Pkg.
GRL14	$.95	½	25
GRL24	1.00	¾	25

Type GRLA



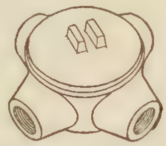
Cat. No.	Each	Size Hub, In.	Std. Pkg.
GRLA14	$1.00	½	25
GRLA24	1.05	¾	25

Type GRT



Cat. No.	Each	Size Hub, In.	Std. Pkg.
GRT14	$1.00	½	25
GRT24	1.05	¾	25

Type GRX



Cat. No.	Each	Size Hub, In.	Std. Pkg.
GRX14	$1.05	½	25
GRX24	1.10	¾	25

Cat. No.	Each	Size Hub, In.	Std. Pkg.
GRB14	$.95	½	25
GRB24	1.00	¾	25

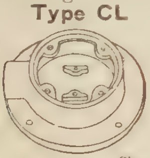
CL Series Condulets

For Ceiling Outlets

Takes covers, fixtures, attachments, connection blocks, plug receptacle housings or other wiring devices.
Cadmium-galvanized is the standard finish.

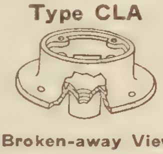
Schedule CR

Type CL



Cat. No.	Each	Size In.	Std. Pkg.
CL1	$1.60	½	25
CL2	1.70	¾	25
CL3	1.80	1	25
CL4	2.15	1¼	25

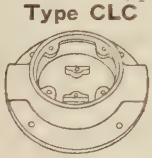
Type CLA



Broken-away View

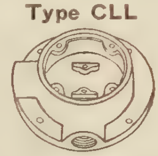
Cat. No.	Each	Size In.	Std. Pkg.
CLA1	$1.60	½	25
CLA2	1.70	¾	25
CLA3	1.80	1	25
.....	....	...	..

Type CLC



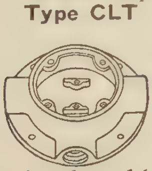
Cat. No.	Each	Size In.	Std. Pkg.
CLC1	$1.70	½	25
CLC2	1.80	¾	25
CLC3	1.90	1	25
CLC4	2.25	1¼	25

Type CLL



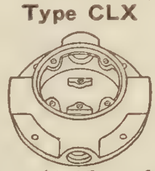
Cat. No.	Each	Size In.	Std. Pkg.
CLL1	$1.70	½	25
CLL2	1.80	¾	25
CLL3	1.90	1	25
.....	....	...	..

Type CLT



Cat. No.	Each	Size In.	Std. Pkg.
CLT1	$1.75	½	25
CLT2	1.85	¾	25
CLT3	1.95	1	25
CLT42	2.30	*1¼–¾	25
....	....	......	..

Type CLX



Cat. No.	Each	Size In.	Std. Pkg.
CLX1	$1.85	½	25
CLX2	1.95	¾	25
CLX3	2.05	1	25
CLX41	2.30	*1¼–½	25
CLX42	2.35	*1¼–¾	25

*1¼-inch mains, ½ and ¾-inch branches.

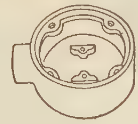
LP Series Condulets

For Ceiling Outlets

Takes covers, fixtures, attachments, connection blocks, plug receptacle housings or other wiring devices.
Cadmium-galvanized is the standard finish.

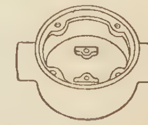
Schedule CR

Type LP



Cat. No.	Each	Size In.	Std. Pkg.
LP1	$1.15	½	25
LP2	1.25	¾	25
LP3	1.35	1	25

Type LPC



Cat. No.	Each	Size In.	Std. Pkg.
LPC1	$1.25	½	25
LPC2	1.35	¾	25
LPC3	1.45	1	25

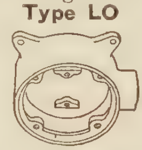
LO Series Condulets

For Ceiling Outlets

Takes covers, fixtures, attachments, connection blocks, plug receptacle housings or other wiring devices.
Cadmium-galvanized is the standard finish.

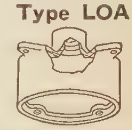
Schedule CR

Type LO



Cat. No.	Each	Size In.	Std. Pkg.
LO1	$1.15	½	25
LO2	1.25	¾	25
LO3	1.35	1	25

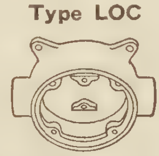
Type LOA



Broken-away View

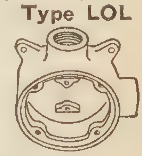
Cat. No.	Each	Size In.	Std. Pkg.
LOA1	$1.15	½	25
LOA2	1.25	¾	25
LOA3	1.35	1	25

Type LOC



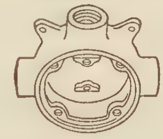
Cat. No.	Each	Size In.	Std. Pkg.
LOC1	$1.25	½	25
LOC2	1.35	¾	25
LOC3	1.45	1	25

Type LOL



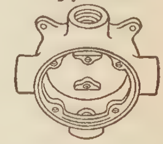
Cat. No.	Each	Size In.	Std. Pkg.
LOL1	$1.25	½	25
LOL2	1.35	¾	25
LOL3	1.45	1	25

Type LOT



Cat. No.	Each	Size In.	Std. Pkg.
LOT1	$1.35	½	25
LOT2	1.45	¾	25
LOT3	1.55	1	25

Type LOX

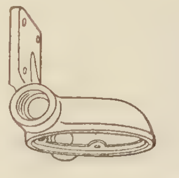


Cat. No.	Each	Size In.	Std. Pkg.
LOX1	$1.40	½	25
LOX2	1.50	¾	25
LOX3	1.60	1	25

Type BLMC Condulet Bodies

Schedule CR

For Deck Sill Outlets



Takes covers, fixtures, attachments, plug receptacle housings or wiring devices.
Cadmium-galvanized standard finish.

Cat. No.	Each	Size In.	Std. Pkg.
BLMC1	$1.45	½	25
BLMC2	1.60	¾	25
BLMC3	1.75	1	25

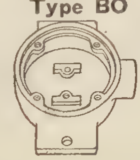
BO Series Condulets

For Ceiling Outlets

Takes covers, fixtures, attachments, connection blocks, plug receptacle housings or other wiring devices.
Cadmium-galvanized is the standard finish.

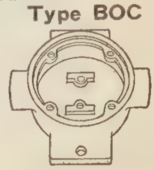
Schedule CR

Type BO



Cat. No.	Each	Size In.	Std. Pkg.
BO1	$1.50	½	25
BO2	1.60	¾	25
BO3	1.70	1	25

Type BOC



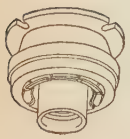
Cat. No.	Each	Size In.	Std. Pkg.
BOC1	$1.65	½	25
BOC2	1.75	¾	25
BOC3	1.85	1	25

Equipment

Schedule CR

Holders

For Condulets of the BLM, BO, CL, LO and LP Series



Type CRSE

Takes 2¼-inch reflector or shades. Furnished with receptacle with lamp grip PE57h.

Cat. No.	Each	Material	Std. Pkg.
CRSE1	$6.00	Bronze	25
CRSE3	6.00	Bronze	25

Type SRH

Takes lamp receptacle C337 and reflector SH25.

SRH2	$.50	Cast Feraloy	50

Lamp Receptacle

For Type CRSE Holders

Furnished with lamp grip.
Has ½-inch female nipple cap.

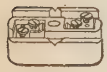
Cat. No.	Each	Rating Watt	Rating Volt	Std. Pkg.
PE57h	$.70	660	600	100

Reflectors

For SRH2 and SRH3 Holders

Porcelain enamel finish.

Cat. No.	Each	Std. Pkg.
SH25	$1.50	50



Connection Blocks

For Condulets of the BO, CL, JRY-KRY, LO, LP and SO Series

Cat. No.	Each	Rating Amp.	Rating Volt	Std. Pkg.
CF101	$.50	20	250	50

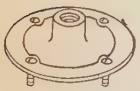
Bezels

For SH25 Reflector

Cat. No.	Each	Material	Std. Pkg.
Bez 1	$1.00	Brass	50

Covers

For Condulets of the BLM, BO, CL, LO and LP Series



Hub Style

Cat. No.	Each	Material	Size In.	Std. Pkg.
LOB83	$.65	Cast Feraloy	⅜	50
LOB84	.65	Cast Feraloy	½	50

Blank Style

LOB00	$.50	Cast Feraloy	..	50
LOB000	.30	Sheet Steel	..	50

ARB Vaporproof Fixtures

For Condulets of the BLM, BO, CL, LO and LP Series

Furnished with globe, guard, receptacle C337, and gaskets. Regularly furnished with clear globes, can be furnished with colored globes at an additional charge.
Galvanized is the standard finish.

Form 75

Furnished with Globe V75 and Guard V911, and takes 50-watt (PS20), 60-watt (A21), 75-watt (PS22), or 100-watt (A23) lamps.

Form 200

Furnished with Globe V200 and Guard V912, and takes 100 or 150-watt (PS25), or 200-watt (PS30) lamps.

Form 75 Cat. No.	Each	Std. Pkg.	Form 200 Cat. No.	Each	Std. Pkg.
ARB37	$4.10	25	ARB33	$4.75	25

For prices without globe and guard, deduct $2.60 from price of Form 75, and $3.05 from price of Form 200.

Equipment

Schedule CR

For Mounting on Condulets of the CL and LO Series

Used for railway mail car lighting and fan installations. Cadmium-galvanized is the standard finish.

Fixtures

Standard package quantity is 20.

For Storage Section Lighting

For 50-watt, A21 or PS20 lamps.

No. LOB101, Complete with Holder, Lamp Receptacle GS1621 and Reflector.....each $4.00
No. LOB104, Holder Only, Complete except Reflector.....each 1.00
No. SH50, 12-Inch RLM Reflector Only.....each 3.00

For Door and Lavatory Lights

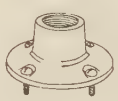
Furnished with lamp receptacle GS1621. The half shade is cast as an integral part of the receptacle holder.
No. LOB102, For 25-Watt, S17, A19 or PS16 Lamps.....each $1.80
No. LOB103, For 50-Watt, A21 or PS20 Lamps.....each 2.00

Fixture Bases

Three standard angle fixture bases are listed to take care of the curvature of car roofs at letter-case mountings. These angles, together with a possible slight shimming of the condulets, should meet nearly every condition.

The complete fixture is made up by assembling a condulet of the CL or LO Series, Type LOB Fixture Base, Type DAH Reflector Holder and a conduit stem of the proper length.

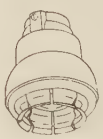
Assorted standard package quantity is 20.



Style Hub	1-Inch Cat. No.	1-Inch Each	1½-Inch Cat. No.	1½-Inch Each
Straight	LOB88	$.75	LOB812	$.85
6°-Angle	LOB88-6	.75	LOB812-6	.85
12°-Angle	LOB88-12	.75	LOB812-12	.85
18°-Angle	LOB88-18	.75	LOB812-18	.85

Reflector Holders

Furnished either with or without a spun steel canopy which slips over brass reflector holder ring to keep out paint and dirt so that it will always be easy to operate the reflector holder.



Cat. No.	Each	Style	Size In.	Std. Pkg.
DAH13	$4.75	With Canopy	1	20
DAH15	5.00	With Canopy	1½	20
DAH1	3.70	Without Canopy	½	20
DAH2	3.80	Without Canopy	¾	20
DAH3	3.90	Without Canopy	1	20
DAH5	4.00	Without Canopy	1½	20

Reflectors

For DAH Reflector Holders

Opal glass; medium density.

Cat. No.	Each	Std. Pkg.
SH40	$1.50	20

Receptacles

For DAH Reflector Holders

Cat. No.	Each	Rating Watt	Rating Volt	Std. Pkg.
PE55	$.40	660	600	200

Can be furnished with lamp grip at 10 cents extra.

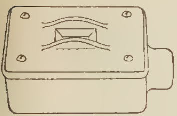
FS Series Switch Condulets

Schedule CR

Cadmium-galvanized is the standard finish.

Type FS

For controlling the lavatory light, door lights at the opposite end from the lavatory in full mail cars and door lights in baggage compartment of combination mail and baggage cars.



Takes any standard square handle, single-pole, flush tumbler switch.

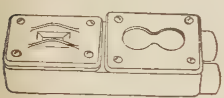
Has guarded switch cover.

Cat. No.	Each	Size In.	Std. Pkg.
FS132g	$1.00	½	50

Type FSS—Fusible

For controlling the door lights in the clear storage end or lavatory end of full mail cars; for one door light in 15-foot postal apartments; or for use in any location where a fusible switch is required.

Takes one standard square handle, double-pole, flush tumbler switch; and one standard double-pole, plug fuse cutout No. 62965.

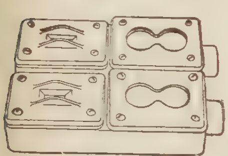


Furnished with guarded switch cover and cover for fuse cutout.

Cat. No.	Each	Size In.	Std. Pkg.
FSS1732	$2.45	½	10

Type FSS—2-Gang—Fusible

For controlling door lights and center lights of 15 or 30-foot postal apartments.



Takes 2 standard square handle, double-pole, flush tumbler switches, and 2 standard double-pole, plug fuse cutouts No. 62965.

Furnished with guarded switch covers and covers for fuse cutouts.

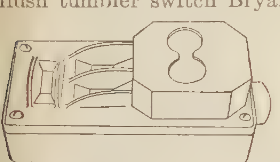
Cat. No.	Each	Size In.	Std. Pkg.
FSS2834	$4.75	¾	10

Type FSF

For Fan Control Switch

The lower double-pole switch is actually the "on" and "off" control of the fan. When this switch is thrown to "on" position, it starts the fan in low speed. If medium or high speed is desired, the switch indicated as medium or high may be thrown in to obtain those speeds, but in order to stop the fan it is only necessary to throw the lower double-pole switch to the "off" position.

Takes one standard square handle, double-pole, flush tumbler switch; one standard square handle, 2-circuit, flush tumbler switch Bryant No. 2892 or similar; and one standard double-pole, plug fuse cutout No. 62965.



Furnished with cover and resistance for 32-volt fan.

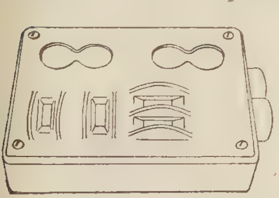
Cat. No.	Each	Size In.	Std. Pkg.
FSF251	$7.50	¾	5

Type FSF

For Combination Fan and Light Control Switch

A 2-gang switch performing the functions of one No. FSS1732 Light Control Switch and one No. FSF251 Fan Control Switch.

Takes 2 standard square handle, double-pole, flush tumbler switches; one standard square handle 2-circuit, flush tumbler switch Bryant No. 2892 or similar; and 2 standard double-pole, plug fuse cutouts No. 62965.



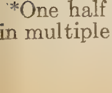
Furnished with cover, resistance for 32-volt fan and one RE21 Reducer.

Cat. No.	Each	Size In.	Std. Pkg.
FSF2281	$10.00	¾	5

Type FSFR Resistances

For 3-Speed Fan

Used in Type FSF switch condulets.



Cat. No.	Each	Voltage	Resistance Ohms	Std. Pkg.
FSFR10	$1.50	32	5-10	10
FSFR100	1.50	64	*25-50	10
FSFR100	1.50	110	50-100	10

*One half of 100-ohm resistance for 50 ohms, and 2 halves in multiple for 25 ohms.

JRY-KRY Series Condulets

Schedule CR

For Side Wall or Car Vestibule Fixtures

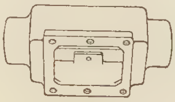
For mounting back of the car finish. The fixtures can be fastened directly to them instead of the finish of the car; therefore, it is unnecessary to reinforce the car finish where the fastening screws enter. Takes connection blocks and fixtures.

The use of connection block No. CF101 eliminates soldered and taped joints, facilitating the removal of fixtures for refinishing or other purposes.

Fixtures are not furnished for this series, but the fastening screw holes are spaced and tapped to take fixtures.

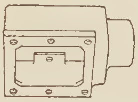
Cadmium-galvanized is the standard finish.

Type JRY



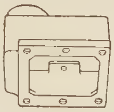
Cat. No.	Each	Size In.	Std. Pkg.
JRY1	$.70	½	25
JRY2	.80	¾	25
JRY3	.90	1	25

Type KRY



Cat. No.	Each	Size In.	Std. Pkg.
KRY1	$.65	½	25
KRY2	.75	¾	25
KRY3	.85	1	25

Type KRYA

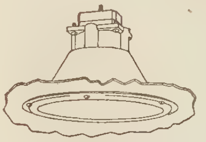


Cat. No.	Each	Size In.	Std. Pkg.
KRYA1	$.65	½	25
KRYA2	.75	¾	25
KRYA3	.85	1	25

Type SRH Car Vestibule Fixtures

Schedule CR

For Condulets of the JRY-KRY Series

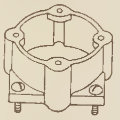


Cadmium-galvanized is the standard finish.

Fixtures Complete

Consists of holder SRH3, reflector SH25, receptacle C227 and Bezel Bez 1.

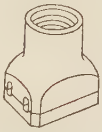
Cat. No.	Each	Std. Pkg.
SRH357	$3.50	25



Holders Only

For SRH Fixture

Cat. No.	Each	Std. Pkg.
SRH3	$.75	25



Lamp Receptacles

For SRH Fixture

Cat. No.	Each	Rating Watt	Rating Volt	Std. Pkg.
C227	$.25	660	600	100

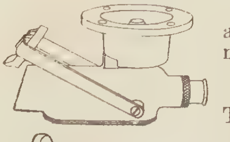
TJ Series Telephone Jack Condulets

Schedule CR

Arranged with bracket to take Western Electric Telephone Jack No. 200. When the plug is removed, a lid automatically closes the opening and prevents the entrance of dust, moisture and insects. Cadmium-galvanized, standard finish.

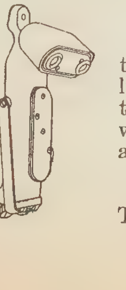
Type TJ

Intended for use under the body of a railroad car. Has a swivel base which allows the plug to pull out easily when the car is moved.



Furnished with insulating bushing and jack support attached to gasketed metal cover.

Cat. No.	Each	Std. Pkg.
TJ200	$5.00	15



Type TJD

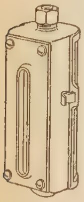
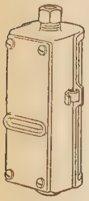
Intended for use on poles or buildings along the right-of-way of a railroad, transmission line or canal. The line wires enter the condulet through a 2-wire porcelain cover. Furnished with 2-wire porcelain cover and jack support attached to gasketed metal cover.

Cat. No.	Each	Std. Pkg.
TJD200	$5.00	15

Type LG Gauge Lamps

Schedule CR

Bottom tapped for ⅜-in. bolt for attaching to bracket on boiler head or in cab. Cast Aluminum; aluminum standard finish. Takes lamps in A17, S14, or S17 bulb. Lamp receptacle with lamp grip furnished.

Water Glass Lamps

Vertical Slot

Cat. No.	Each	Size Inches	Std. Pkg.
LG21	$3.50	A-½	10
LG201	3.50	B-.220 to .260	10
LG22	3.50	B-.313 to .375	10
LG23	3.50	B-.375 to .438	10
LG24	3.50	B-.469 to .560	10
LG229	3.50	C-.406 to .453	10
LG232	3.50	C-.453 to .500	10
LG235	3.50	C-.500 to .547	10

Horizontal Slot

Cat. No.	Each	Size Inches	Std. Pkg.
LG51	$3.50	A-½	10
LG501	3.50	B-.220 to .260	10
LG52	3.50	B-.313 to .375	10
LG53	3.50	B-.375 to .438	10
LG54	3.50	B-.469 to .560	10
LG529	3.50	C-.406 to .453	10
LG532	3.50	C-.453 to .500	10
LG535	3.50	C-.500 to .547	10

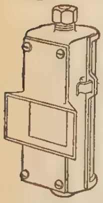
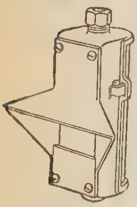
Lubricator Lamps

13-Inch Slot

Cat. No.	Each	Size Inches	Std. Pkg.
LG31	$5.00	A-½	10
LG301	5.00	B-.220 to .260	10
LG32	5.00	B-.313 to .375	10
LG33	5.00	B-.375 to .438	10
LG34	5.00	B-.469 to .560	10
LG329	5.00	C-.406 to .453	10
LG332	5.00	C-.453 to .500	10
LG335	5.00	C-.500 to .547	10

8½-Inch Slot

Cat. No.	Each	Size Inches	Std. Pkg.
LG41	$4.20	A-½	10
LG401	4.20	B-.220 to .260	10
LG42	4.20	B-.313 to .375	10
LG43	4.20	B-.375 to .438	10
LG44	4.20	B-.469 to .560	10
LG429	4.20	C-.406 to .453	10
LG432	4.20	C-.453 to .500	10
LG435	4.20	C-.500 to .547	10

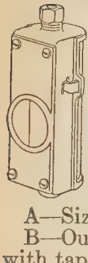
Multiple Steam and Air Gauge Lamps

Rectangular Opening

Cat. No.	Each	Size Inches	Std. Pkg.
LG61	$4.25	A-½	10
LG601	4.25	B-.220 to .260	10
LG62	4.25	B-.313 to .375	10
LG63	4.25	B-.375 to .438	10
LG64	4.25	B-.469 to .560	10
LG629	4.25	C-.406 to .453	10
LG632	4.25	C-.453 to .500	10
LG635	4.25	C-.500 to .547	10

Rectangular Opening—Hooded

Cat. No.	Each	Size Inches	Std. Pkg.
LG71	$4.25	A-½	10
LG701	4.25	B-.220 to .260	10
LG72	4.25	B-.313 to .375	10
LG73	4.25	B-.375 to .438	10
LG74	4.25	B-.469 to .560	10
LG729	4.25	C-.406 to .453	10
LG732	4.25	C-.453 to .500	10
LG735	4.25	C-.500 to .547	10



Single Steam and Air Gauge Lamps

Round Opening

Cat. No.	Each	Size Inches	Std. Pkg.
LG11	$3.50	A-½	10
LG101	3.50	B-.220 to .260	10
LG12	3.50	B-.313 to .375	10
LG13	3.50	B-.375 to .438	10
LG14	3.50	B-.469 to .560	10
LG129	3.50	C-.406 to .453	10
LG132	3.50	C-.453 to .500	10
LG135	3.50	C-.500 to .547	10

A—Size of hub for ½-inch rigid conduit.

B—Outside diameter of round cord or cable. Furnished with tapered bushing and gland nut.

C—Outside diameter of flexible conduit or armored cable. Furnished with tapered split lead sleeve and gland nut.

LD Series Tender Lamp Condulets

Schedule CR

Cast feraloy. Cadmium-galvanized is standard finish.

Types LDJ and LD

Used as back up lamps on rear of locomotive tenders.

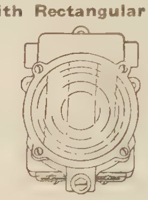
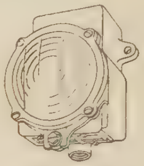
Weatherproof; front and side roundels gasketed. Provided with removable sliding door which is held in position by a cap screw.

The style with 2 round openings in the sides provides ground illumination so that the engineer can see that the lamp is burning. The style with rectangular opening in the bottom not only provides ground illumination, but also throws a light directly downward for coupling.

Takes any medium screw base lamp in A17, A19, A21, S17, S21, G18½ or P19 bulb. Furnished with clear Spredlite Lens, lamp receptacle with lamp grip, and gaskets.

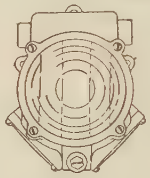
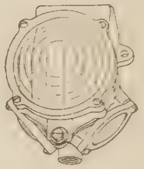
Type LDJ — **Type LD**

With Rectangular Opening and Plain Glass in Bottom

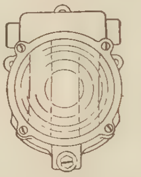
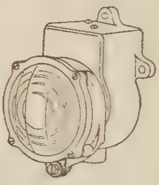
Cat. No.	Each	Size In.	Std. Pkg. Astd.	Cat. No.	Each	Size In.	Std. Pkg. Astd.
LDJ17	$8.40	½	10	LD17	$8.30	½	10
LDJ27	8.50	¾	10	LD27	8.40	¾	10

With 2 Round Openings and Semaphore Lens in Sides

Cat. No.	Each	Size In.	Std. Pkg. Astd.	Cat. No.	Each	Size In.	Std. Pkg. Astd.
LDJ15	$9.60	½	10	LD15	$9.50	½	10
LDJ25	9.70	¾	10	LD25	9.60	¾	10

With Front Opening Only

Cat. No.	Each	Size In.	Std. Pkg. Astd.	Cat. No.	Each	Size In.	Std. Pkg. Astd.
LDJ12	$7.40	½	10	LD12	$7.30	½	10
LDJ22	7.50	¾	10	LD22	7.40	¾	10

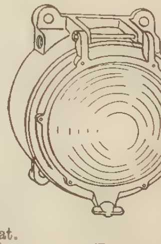
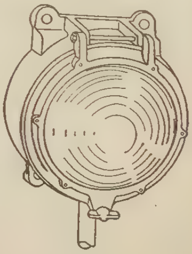
Can be furnished in aluminum at $3.50 extra.

Types LDBJ and LDBF

Takes 30–34, 110, 115 or 120-volt, 100-watt, medium screw base G25 lamp. Furnished with 8-inch Semaphore Lens and lamp receptacle with lamp grip.

Type LDBJ — For Through Feed Horizontal Conduit

Type LDBF — For Vertical Conduit In Bottom

Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
LDBJ1	$12.50	½	5	LDBF1	$12.40	½	5
LDBJ2	12.60	¾	5	LDBF2	12.50	¾	5

Can be furnished in aluminum at $4.50 extra.

LE Series 2-Color Tender Lamp Condulets

Schedule CR

Provided with a red color screen that may be placed between the lamp and the lens when a red light is desired. In Type LEA, the door must be opened to operate color screen; in Types LEBJ and LEBF, it is operated by means of a lever on the outside of the case.

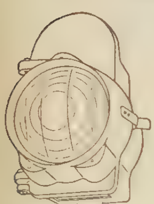
A single rectangular glass-covered opening in Type LEA, and 2 such openings in Types LEBJ and LEBF, throw a light downward for coupling and for ground illumination.

Doors, lenses and openings in the bottom are gasketed, making the condulets weatherproof.

Cast feraloy. Cadmium-galvanized is the standard finish.

Type LEA

With Rectangular Opening and Plain Glass in Bottom



Takes any medium screw base lamp in A17 or S17 bulb. Furnished with 5⅜-inch clear Spredlite Lens, color screen, C139 Keyless Lamp Receptacle with lamp grip, and gaskets.

Cat. No.	Each	Size In.	Std. Pkg. Astd.
LEA18	$10.00	½	10
LEA28	10.00	¾	10

Can be furnished with No. C131 Key Receptacle with lamp grip at 20 cents extra; or with the same key receptacle and an operating mechanism similar to that furnished with Type LEBJ Condulet at 70 cents extra. If furnished with key receptacle without the operating mechanism, the door must be opened to operate the key receptacle. Can be tapped for conduit in the back or at either side instead of at bottom. Can be furnished in aluminum at $3.25 extra.

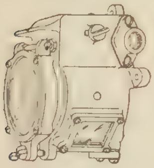
Types LEBJ and LEBF

Take any medium screw base lamp in A17 or S17 bulb.

Furnished with GSG Removable Conduit Hub Plates, 5⅜-inch clear Spredlite Lens, and color screen and key receptacle No. C123 with lamp grip. Key receptacle is controlled by a simple durable externally operated knob or button.

Type LEBJ

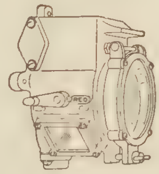
For Through Feed Horizontal Conduit



Cat. No.	Each	Size In.	Std. Pkg. Astd.
LEBJ18	$14.25	½	5
LEBJ28	14.35	¾	5

Type LEBF

For Vertical Conduit in Bottom



Cat. No.	Each	Size In.	Std. Pkg. Astd.
LEBF18	$14.20	½	5
LEBF28	14.30	¾	5

Can be furnished in aluminum at $3.75 extra.

Conduit Hub Plates

Schedule CR

For Types LEBJ and LEBF Tender Lamp Condulets

Cast feraloy.

With One Hub

Cat. No.	Each	Size In.	Std. Pkg.
GSG61	$.25	½	25
GSG62	.30	¾	25
GSG63	.35	1	25

Blank

Cat. No.	Each	Std. Pkg.
GSG600	$.20	25
....	...	..
....	...	..

LG Series Locomotive Filler Hole and Stack Lamp Condulets

Schedule CR

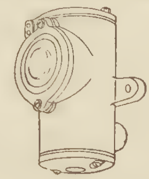
Each type consists of a cylindrical housing enclosing receptacle for an incandescent lamp in A17 or S17 bulb and tapped for rigid conduit. Furnished with lamp receptacle with lamp grip and 3-inch clear semaphore lens.

Type LGUA is especially intended for oil burning locomotives to furnish light for taking on oil and water. It is provided with lugs for fastening bolts. Made of cast feraloy. Cadmium-galvanized is the standard finish.

Type LGUB is similar to Type LGUA except the hub comes out at an angle of about 30 degrees to the axis. No lugs are provided for fastening, the lamp being supported by the conduit. Made of cast aluminum. Aluminum is the standard finish.

Type LGUA

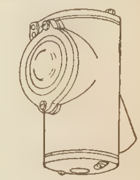
Filler Hole Lamp Condulet



Cat. No.	Each	Size In.	Std. Pkg. Astd.
LGUA1	$4.25	½	10

Type LGUB

Stack Lamp Condulet



Cat. No.	Each	Size In.	Std. Pkg. Astd.
LGUB1	$5.50	½	10

LMK Series Engineer's Reading Light Condulets

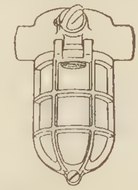
Schedule CR

Also suitable for use in railroad shops, roundhouses and railroad yards. Provided with a half shade and with or without a half guard. The shade is cast as part of the condulet, while guard is hinged to condulet.

The body and shade are cast feraloy; the guard is cast aluminum. Cadmium-galvanized is the standard finish.

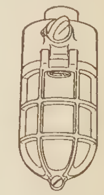
Takes any lamp in A17 or S17 bulb. With key receptacle with lamp grip, and metal key operating mechanism.

Type LMKJ



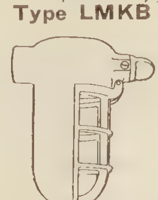
Cat. No.	Each	Size In.	Std. Pkg.
With Guard			
LMKJ225	$3.50	¾	10
Without Guard			
LMKJ224	$2.75	¾	10

Type LMKA



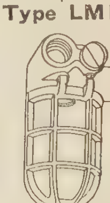
Cat. No.	Each	Size In.	Std. Pkg.
With Guard			
LMKA225	$3.40	¾	10
Without Guard			
LMKA224	$2.65	¾	10

Type LMKB



Cat. No.	Each	Size In.	Std. Pkg.
With Guard			
LMKB225	$3.40	¾	10
Without Guard			
LMKB224	$2.65	¾	10

Type LMKL



Cat. No.	Each	Size In.	Std. Pkg.
With Guard			
LMKL225	$3.50	¾	10
Without Guard			
LMKL224	$2.75	¾	10

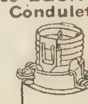
*Key Receptacle

For Condulets of LMK Series

Cat. No.	Each	Rating Watt	Rating Volt	Std. Pkg.
C131	$.70	250	250	50

*Keyless Receptacle

For Types LGUA and LGUB Condulets



Cat. No.	Each	Rating Watt	Rating Volt	Std. Pkg.
C129	$.50	660	250	50

*With lamp grip. Composition base.

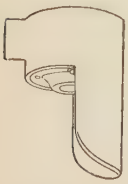
LM Series Locomotive Deck Light Condulets

Schedule CR

For locomotive gangways; provides illumination for coal passers. Consists of a condulet and half shade cast in one piece, and a weatherproof composition receptacle with lamp grip. The half shade is the correct length and size so that when used with a 25-watt, A17 or S17 lamp, the filament is not visible from any point over the rear end of the tender. The diameter of the half shade prevents the use of large headlight bulbs.

Cadmium-galvanized is the standard finish.

Type LMG

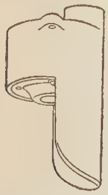


Cat. No.	Each	Size In.	Std. Pkg.
LMG125	$1.80	½	10
LMG225	1.90	¾	10

Type LMD

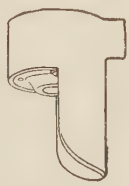
Cat. No.	Each	Size In.	Std. Pkg.
LMD125	$1.80	½	10
LMD225	1.90	¾	10

Type LMA



Cat. No.	Each	Size In.	Std. Pkg.
LMA125	$1.80	½	10
LMA225	1.90	¾	10

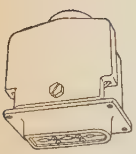
Type LMH



Cat. No.	Each	Size In.	Std. Pkg.
LMH125	$1.80	½	10
LMH225	1.90	¾	10

Type MDA Connector Condulets

Schedule CR

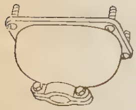


Furnished with connection block, wire hole cover and removable sliding cover.

Capacity, 100 amperes.

Size In.	Astd. Std. Pkg.	125-Volt 3-Pole Cat. No.	Each	65-Volt 4-Pole Cat. No.	Each
1¼	10	MDA438	$8.15	MDA444	$9.00
1½	10	MDA538	8.35	MDA544	9.20

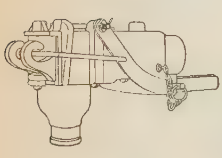
Attachment for Flexible Conduit



Size Flex. Cond. In.	Std. Pkg.	3-Pole Cat. No.	Each	4-Pole Cat. No.	Each
1¼	10	MDA39	$1.50	MDA49	$1.50

Type MD Connector Condulets

Schedule CR



Furnished with plug No. MD03. Capacity, 200 amperes, 250 volts; 3-pole.

Cat. No.	Each	Size In.	Std. Pkg. Astd.
MD3	$25.50	1	10
MD4	25.75	1¼	10
MD5	26.00	1½	10

Plug Only

Capacity, 200 amperes, 250 volts; 3-pole.

Cat. No.	Each	Std. Pkg.
MD03	$8.50	10

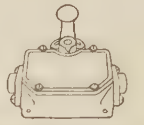
LHS Series Locomotive Headlight Switch Condulets

Schedule CR

34-Volt, 24-Ampere—125-Volt, 6-Ampere—250-Volt, 3-Ampere

Cadmium-galvanized is the standard finish.

Type LHSJ



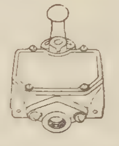
3-Positions: Dim—Off—Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSJ1	$11.50	LHSJ105	$14.80
¾	10	LHSJ2	11.60	LHSJ205	14.90
1	10	LHSJ3	11.70	LHSJ305	15.00

3-Positions: Front Dim, Rear Bright—Off—Rear Dim, Front Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSJ17	$11.50	LHSJ175	$14.80
¾	10	LHSJ27	11.60	LHSJ275	14.90
1	10	LHSJ37	11.70	LHSJ375	15.00

Type LHSA



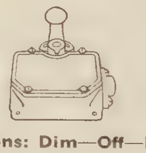
3-Positions: Dim—Off—Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSA1	$11.40	LHSA105	$14.70
¾	10	LHSA2	11.50	LHSA205	14.80
1	10	LHSA3	11.60	LHSA305	14.90

3-Positions: Front Dim, Rear Bright—Off—Rear Dim, Front Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSA17	$11.40	LHSA175	$14.70
¾	10	LHSA27	11.50	LHSA275	14.80
1	10	LHSA37	11.60	LHSA375	14.90

Type LHSK



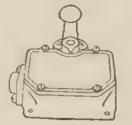
3-Positions: Dim—Off—Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSK1	$11.40	LHSK105	$14.70
¾	10	LHSK2	11.50	LHSK205	14.80
1	10	LHSK3	11.60	LHSK305	14.90

3-Positions: Front Dim, Rear Bright—Off—Rear Dim, Front Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSK17	$11.40	LHSK175	$14.70
¾	10	LHSK27	11.50	LHSK275	14.80
1	10	LHSK37	11.60	LHSK375	14.90

Type LHSP



3-Positions: Dim—Off—Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSP1	$11.40	LHSP105	$14.70
¾	10	LHSP2	11.50	LHSP205	14.80
1	10	LHSP3	11.60	LHSP305	14.90

3-Positions: Front Dim, Rear Bright—Off—Rear Dim, Front Bright

Size In.	Std. Pkg.	Without Resistance Cat. No.	Each	With Resistance Cat. No.	Each
½	10	LHSP17	$11.40	LHSP175	$14.70
¾	10	LHSP27	11.50	LHSP275	14.80
1	10	LHSP37	11.60	LHSP375	14.90

UG Series Battery Charging Condulets

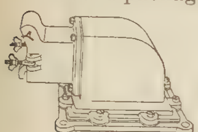
Schedule CR

Single receptacle battery charging condulets.

Furnished with 2-pole rectangular or round receptacle, spring door and gaskets. Rectangular receptacle No. BR100 is rated at 100 amperes, 80 volts and takes plugs Nos. BP100, BPB100 or BPF100. Round receptacle No. BRA100 is rated at 100 amperes, 125 volts and takes plugs Nos. BPA100, BPA105 or BPFA100. Rectangular receptacle No. *BR200 is rated at 200 amperes, 65 volts and takes 200-ampere plugs Nos. BPD200, BPD203, BPFD200 or BPB100 or 100-ampere plugs Nos. BP100 or No. BPF100.

Cadmium-galvanized is the standard finish.

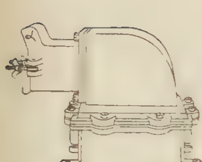
Standard package quantity is 5.



Type UGEL

With Base Plate

Size In.	With Rectangular Receptacle *No. BR100 Cat. No.	Each	With Round Receptacle No. BRA100 Cat. No.	Each
...	UGEL1010	$24.50	UGEL1020	$27.25
Without Base Plate				
...	UGEL101	22.00	UGEL102	24.75



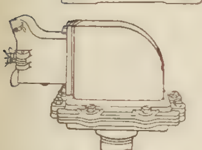
Type UGEL—Surface Style

For 2 Conduits—With UGC Condulet

1¼	UGEL412	$28.75	UGEL422	$31.50
1½	UGEL512	29.15	UGEL522	31.90
2	UGEL612	29.55	UGEL622	32.30

For 4 Conduits—With UGX Condulet

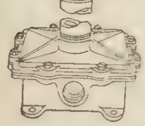
1¼	UGEL414	$28.95	UGEL424	$31.70
1½	UGEL514	29.35	UGEL524	32.10
2	UGEL614	29.75	UGEL624	32.50



**Type UGEL—Underground Style

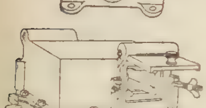
For 2 Conduits—With UGC Condulet

1¼	UGEL4126	$36.50	UGEL4226	$39.25
1½	UGEL5126	36.90	UGEL5226	39.65
2	UGEL6126	37.30	UGEL6226	40.05



For 4-Conduits—With UGX Condulet

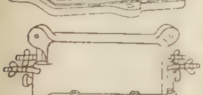
1¼	UGEL4146	$36.70	UGEL4246	$39.45
1½	UGEL5146	37.10	UGEL5246	39.85
2	UGEL6146	37.50	UGEL6246	40.25



Type UGEM

With Base Plate

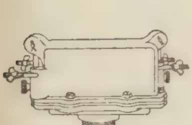
...	UGEM1010	$33.75	UGEM1020	$39.25



Type UGEM

Without Base Plate

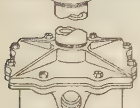
...	UGEM101	$29.00	UGEM102	$34.50



**Type UGCD—Underground Style

For 2 Conduits—With UGC Condulet

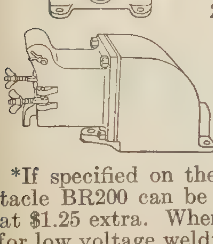
1¼	UGCD41	$42.00	UGCD42	$47.50
1½	UGCD51	42.40	UGCD52	47.90
2	UGCD61	42.80	UGCD62	48.30



**Type UGXD—Underground Style

For 4 Conduits—With UGX Condulet

1¼	UGXD41	$42.20	UGXD42	$47.70
1½	UGXD51	42.60	UGXD52	48.10
2	UGXD61	43.00	UGXD62	48.50



Type UGEN

For One Conduit

1¼	UGEN4101	$18.50	UGEN4102	$21.25
1½	UGEN5101	18.75	UGEN5102	21.50
2	UGEN6101	19.00	UGEN6102	21.75

*If specified on the order, 200-ampere rectangular receptacle BR200 can be substituted for receptacle No. BR100 at $1.25 extra. When so arranged, the condulet is suitable for low voltage welding machines of 200-ampere capacity.

**Furnished with hub plate and hub cover for 2-inch conduit stem. Conduit stem is not furnished.

BRH Series Battery Charging Condulets

Schedule CR

For Flexible Cable

For storage battery charging outlets, particularly on railroad cars and electric vehicles.

Makes excellent outlets for electric welding systems. If one side of the welding circuit is permanently grounded, both terminals of the plug and receptacle can be connected to the same conductor, thereby making them single-pole and doubling the ampere capacity.

Made for flexible cable. Furnished with 2-pole rectangular or round receptacles which are interchangeable in all the condulets of the BRH Series, except BRHE which takes the round receptacle only.

Receptacles and plugs are polarized.

The receptacle housings are provided with a spring door.

Types BRHA and BRHE are furnished with improved M.C.B. Brackets and are pivoted so as to allow the receptacle to align itself with the direction of the pull on the plug when the latter is withdrawn. Both of these condulets comply with all the A.R.E.E. standards.

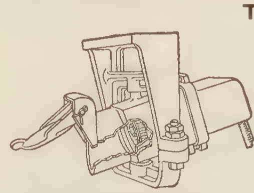
The housing of Type BRHE is inclined at an angle and the wires enter the condulet from the bottom. The wire openings can be sealed by wrapping tape around the wires where they enter the housing. The combination of these features prevents the collection of dust, cinders, and moisture within the receptacle. Another advantage of having the housing set at an angle is that there is no downward pull on the receptacle when the plug is jerked out by the car moving away. Receptacle No. BRA100, which is furnished with this condulet, has self aligning contacts. Furthermore, that part of the housing around the opening of the receptacle is made extra long so that it and the plug handle will take the side strain.

Rectangular receptacle No. BR100 takes plug No. BP100. Round receptacle No. BRA100 takes plugs No. BPA100 or No. BPA105. Rectangular receptacle No. BR200 takes plugs Nos. BPD200, BPD203 or BP100.

Cadmium-galvanized is the standard finish.

Standard package quantity is 5.

Type BRHE

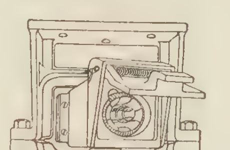


Broken-Away View

Furnished with improved M.C.B. Bracket and 2-pole, round receptacle No. BRA-100.

Cat. No.	Each	Rating Amp.	Rating Volt
BRHE102	$22.50	100	125

Type BRHA



Furnished with improved M.C.B. Bracket and 2-pole, rectangular receptacle No. BR100.

BRHA101	$17.50	100	80

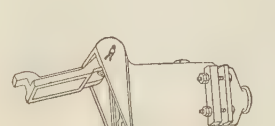
Furnished with improved M.C.B. Bracket and 2-pole rectangular receptacle No. BR200.

BRHA201	$18.75	200	65

Furnished with improved M.C.B. Bracket and 2-pole round receptacle No. BRA100.

BRHA102	$20.25	100	125

Type BRH



Housing for M.C.B. Bracket. Furnished with 2-pole rectangular receptacle No. BR100.

BRH101	$12.50	100	80

Housing for M.C.B. Bracket. Furnished with 2-pole rectangular receptacle No. BR200.

BRH201	$13.75	200	65

Housing for M.C.B. Bracket. Furnished with 2-pole round receptacle No. BRA100.

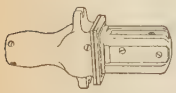
BRH102	$15.25	100	125

Plugs

Schedule CR

Aluminum is the standard finish for plug handles. Standard package quantity is 5.

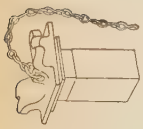
For Battery Charging Condulets of UG Series



Types BPF and BPFD

Two-pole, rectangular for receptacles No. BR100 or No. BR200.

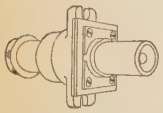
Cat. No.	Each	Rating
BPF100	$12.00	*100-A., 80-V.
BPFD200	13.00	*200-A., 65-V.



Type BPB

Two-pole, rectangular for receptacles No. BR100 or No. BR200.

BPB100 $4.00 Short Circuiting



Type BPFA

Two-pole, round for receptacle No. BRA100.

**BPFA100 $9.50 *100-A., 125-V.

For Battery Charging Condulets of BRH and UG Series

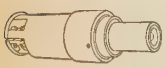
Types BP and BPD

Two-pole, rectangular for receptacles No. BR100 or No. BR200.

BP100	$11.00	*100-A., 80-V.
BPD200	12.00	*200-A., 65-V.
BPD203	13.00	*200-A., 65-V.

Type BPA

Two-pole, round for receptacle No. BRA100.



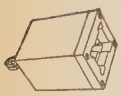
**BPA100 $8.50 *100-A., 125-V.

**BPA105 8.50 *100-A., 125-V.

Plug Receptacles

Schedule CR

For Battery Charging Condulets of the BRH and UG Series—Type BR—Rectangular



Cat. No.	Each	Rating A.	Rating V.	Takes Plugs	Std. Pkg.
BR 100	$7.75	100	80	BP100, BPB100, BPF100	5
BR 200	9.00	200	65	BPD200, BPD203, BPFD200	5

Type BRA—Round

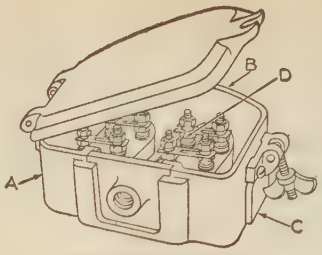
BRA100 $10.50 100 125 BPA100, BPA105, BPFA100 5

*Sizes of conductors for plugs and plug receptacles: BP100 and BPF100 take No. 1 Duplex Cable. BPD200 and BPFD 200 take No. 0000 Duplex Charging Cable. BPD203 takes No. 00 Armored Mining Machine Cable, outside diameter $1\frac{13}{16}$ inches. BPA100 and BPFA100 take No. 1 Duplex Cable. BPA105 takes No. 1 Round Flexible Cable, outside diameter $1\frac{3}{16}$ to $1\frac{7}{16}$ inches. The wire terminals of receptacle BR100 are drilled $\frac{11}{32}$ of an inch in diameter and will take any size cable up to and including No. 1, B & S gauge. The wire terminals of receptacle BRA100 are drilled $\frac{13}{32}$ of an inch in diameter and will take any size cable up to and including No. 0, B & S gauge. The wire terminals of receptacle BR200 are drilled $\frac{5}{8}$ of an inch in diameter and will take any size cable up to and including No. 0000, B & S gauge.

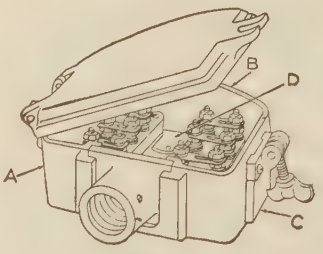
**A spanner wrench will be furnished free with every shipment of BPA100 or BPA105 Plugs. If ordered separately or additionally, they can be furnished at 35 cents each.

Type YE Cab Connection Condulets

Schedule CR



For Rigid Conduit



For Flexible Conduit

Especially intended for use on locomotives. Provides an easy means for connecting the wiring system on the boiler to that in the cab.

A detachable hub plate is furnished which slides into grooves at the bottom of the condulet and may be quickly removed when door is open.

Also furnished with 4 bosses, any of which can be tapped for $\frac{1}{2}$, $\frac{3}{4}$ or 1-inch rigid conduit, but there are no hubs cast solid with the body.

The connection blocks furnished with these condulets are equipped with 14-24 R.S.A. Binding Nuts; 4-wire condulets are furnished with 2 connection blocks CB9222; 6-wire with two CB9223; 8-wire with two CB9223 and one CB9222. The removable plates are made in 2 styles: One for rigid conduit and one for flexible conduit.

Positions of drilling and tapping in the bosses should be specified according to letters A, B, C, D, shown on cuts. A and C are the bosses on the left and right sides, B at the top and D at the back near the top. To order size by number: 1 is $\frac{1}{2}$ inch, 2 is $\frac{3}{4}$ inch, 3 is 1 inch. For example: YE1023-1233 (YE1023 is the catalogue number of the condulet with connection block).

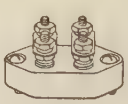
Cadmium-galvanized is the standard finish.

No. of Wires	Size In.	Std. Pkg.	For Rigid Conduit Cat. No.	For Rigid Conduit Each	For Greenfield Double Strip Flexible Conduit Cat. No.	For Greenfield Double Strip Flexible Conduit Each
3	$\frac{1}{2}$	5	YE1023	$6.20	YE1223	$6.35
4	$\frac{1}{2}$	5	YE1024	6.80	YE1224	6.95
6	$\frac{1}{2}$	5	YE1026	7.50	YE1226	7.65
8	$\frac{1}{2}$	5	YE1028	8.60	YE1228	8.75
3	$\frac{3}{4}$	5	YE2023	6.25	YE2223	6.40
4	$\frac{3}{4}$	5	YE2024	6.85	YE2224	7.00
6	$\frac{3}{4}$	5	YE2026	7.55	YE2226	7.70
8	$\frac{3}{4}$	5	YE2028	8.65	YE2228	8.80
3	1	5	YE3023	6.30	YE3223	6.45
4	1	5	YE3024	6.90	YE3224	7.05
6	1	5	YE3026	7.60	YE3226	7.75
8	1	5	YE3028	8.70	YE3228	8.85
3	$1\frac{1}{4}$	5	YE4023	6.35	YE4223	6.50
4	$1\frac{1}{4}$	5	YE4024	7.00	YE4224	7.10
6	$1\frac{1}{4}$	5	YE4026	7.70	YE4226	7.80
8	$1\frac{1}{4}$	5	YE4028	8.80	YE4228	8.90

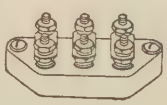
Connection Blocks

Schedule CR

For Type YE Condulets



2-Wire



3-Wire

Cat. No.	Each	Rating Amp.	Rating Volt	No. of Wires	Std. Pkg.
CB9222	$1.10	25	250	2	25
CB9223	1.30	25	250	3	25

Condulet Reducers

Schedule CR

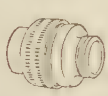
Used to reduce condulets from larger to smaller sizes.

Cadmium-galvanized is the standard finish.

Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
RE2818	$.15	¼– ⅛	50	RE76	$1.00	2½–2	25
RE3818	.15	⅜– ⅛	50	RE81	1.35	3 – ½	25
RE3828	.15	⅜– ¼	50	RE82	1.35	3 – ¾	25
RE1108	.15	½– ⅛	50	RE83	1.35	3 –1	25
RE1208	.15	½– ¼	50	RE84	1.35	3 –1¼	25
RE1308	.15	½– ⅜	50	RE85	1.35	3 –1½	25
RE21	.15	¾– ½	50	RE86	1.35	3 –2	25
RE31	.20	1 – ½	50	RE87	1.35	3 –2½	25
RE32	.20	1 – ¾	50	RE91	2.00	3½– ½	10
RE41	.30	1¼– ½	50	RE92	2.00	3½– ¾	10
RE42	.30	1¼– ¾	50	RE93	2.00	3½–1	10
RE43	.30	1¼–1	50	RE94	2.00	3½–1¼	10
RE51	.40	1½– ½	50	RE95	2.00	3½–1½	10
RE52	.40	1½– ¾	50	RE96	2.00	3½–2	10
RE53	.40	1½–1	50	RE97	2.00	3½–2½	10
RE54	.40	1½–1¼	50	RE98	2.00	3½–3	10
RE61	.50	2 – ½	25	RE101	2.75	4 – ½	10
RE62	.50	2 – ¾	25	RE102	2.75	4 – ¾	10
RE63	.50	2 –1	25	RE103	2.75	4 –1	10
RE64	.50	2 –1¼	25	RE104	2.75	4 –1¼	10
RE65	.50	2 –1½	25	RE105	2.75	4 –1½	10
RE71	1.00	2½– ½	25	RE106	2.75	4 –2	10
RE72	1.00	2½– ¾	25	RE107	2.75	4 –2½	10
RE73	1.00	2½–1	25	RE108	2.75	4 –3	10
RE74	1.00	2½–1¼	25	RE109	2.75	4 –3½	10
RE75	1.00	2½–1½	25	......	....	....	..

Type UNY Condulet Unions

Schedule CE



For connecting conduit to a condulet.

Made of steel. Cadmium-galvanized is the standard finish.

Cat. No.	Each	Size In.	Std. Pkg.	Cat. No.	Each	Size In.	Std. Pkg.
UNY1M2	$.50	½	50	UNY5M2	$2.30	1½	25
UNY2M2	.65	¾	50	UNY6M2	3.65	2	10
UNY3M2	.95	1	25	UNY7M2	5.50	2½	10
UNY4M2	1.90	1¼	25	UNY8M2	7.30	3	5

Gaskets for Obround Series Condulets

Schedule CR

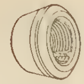
For use between condulets and metal covers or Obround adapters.

Catalogue Numbers: Rubber	Cork	Vellumoid	Each	Size Inches	Std. Pkg.
Gask 571	Gask 671	Gask 771	$.10	½	200
Gask 572	Gask 672	Gask 772	.10	¾	100
Gask 573	Gask 673	Gask 773	.15	1	50
Gask 574	Gask 674	Gask 774	.20	1¼	25
Gask 575	Gask 675	Gask 775	.20	1½	25
Gask 576	Gask 676	Gask 776	.25	2	25
Gask 578	Gask 678	Gask 778	.40	2½ or 3	25
Gask 579	Gask 679	Gask 779	.50	3½ or 4	25

Threadless Condulet Reducers

Schedule CR

For Threadless Condulets



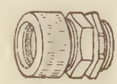
To assemble threadless reducer with a threadless condulet, remove grip ring from nut of the condulet, and substitute reducer for it.

Cadmium-galvanized is the standard finish.

Size Inches	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
¾– ½	50	RE291	$.29	RE241	$.29
1 – ½	50	RE391	.38	RE341	.38
1 – ¾	50	RE392	.43	RE342	.43
1¼– ½	50	RE491	.51	RE441	.51
1¼– ¾	50	RE492	.54	RE442	.54
1¼–1	50	RE493	.58	RE443	.58
1½– ½	50	RE591	.57	RE541	.57
1½– ¾	50	RE592	.64	RE542	.64
1½–1	50	RE593	.67	RE543	.67
1½–1¼	50	RE594	.81	RE544	.81
2 – ½	25	RE691	.75	RE641	.75
2 – ¾	25	RE692	.85	RE642	.85
2 –1	25	RE693	.92	RE643	.92
2 –1¼	25	RE694	1.02	RE644	1.02
2 –1½	25	RE695	1.08	RE645	1.08

Type UCA Threadless Connectors

For Screwing into the Threaded Hub of a Condulet



Type UCA Connector is for connecting a threaded condulet to a piece of threadless conduit. In cases where combinations of threaded and threadless condulets are used, it offers a simple method of branching from a threaded condulet to threadless conduit. In other cases where threadless condulets of a desired type are not available, threaded condulets can be used with Type UCA Connector, in order that threadless conduit may be used.

Cadmium-galvanized is the standard finish.

Thick Wall

Schedule CR

Cat. No.	Each	Size Inches	Std. Pkg.	Cat. No.	Each	Size Inches	Std. Pkg.
UCA1	$.14	½	200	UCA6	$1.75	2	5
UCA2	.21	¾	100	UCA7	2.52	2½	5
UCA3	.48	1	50	UCA8	3.30	3	5
UCA4	.63	1¼	25	UCA9	4.50	3½	5
UCA5	.78	1½	10	UCA10	6.10	4	5

Thin Wall

Schedule CM

Regular

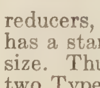
Cat. No.	Net per 100: Std. Pkg.	Carton	Less Carton	Size Inches	Std. Pkg.	Carton
UCA3874	$8.60	$9.10	$9.60	*⅜	200	50
UCA174	5.55	5.90	6.25	½	200	50
UCA274	7.65	8.15	8.65	¾	100	25
UCA374	12.95	13.75	14.65	1	50	10
UCA474	29.40	31.25	33.25	1¼	25	5
UCA574	37.65	40.00	42.65	1½	10	5
UCA674	58.80	58.80	62.50	2	5	5
Watertight						
UCA164	$6.10	$6.50	$6.95	½	200	50
UCA264	8.45	9.00	9.60	¾	100	25
UCA364	14.45	15.40	16.40	1	50	10

*Threaded end is ½ inch; threadless end is ⅜ inch.

Type UCT Threadless Adapters

Schedule CR

Thin Wall



Type UCT Adapters make available all types of threaded condulets, covers, and wiring devices for use with electrical metallic tubing.

They may also be used to connect the tubing to condulet elbows, condulet unions, condulet reducers, threaded pipe, couplings, or to any fitting that has a standard female tapered thread of the corresponding size. Thus, for example, a standard conduit coupling and two Type UCT Adapters make a coupling suitable for use with electrical metallic tubing.

Cadmium-galvanized is the standard finish.

Cat. No.	Each	Size Inches	Std. Pkg.
UCT1	$.06	½	200
UCT2	.08	¾	100
UCT3	.12	1	50

Type UCC Threadless Conduit Unions or Couplings

For Connecting Threaded or Threadless Conduit

Cadmium-galvanized is the standard finish.

Thick Wall

Schedule CR

Cat. No.	Each	Size Inches	Std. Pkg.
UCC1	$.23	½	200
UCC2	.34	¾	100
UCC3	.45	1	50
UCC4	.79	1¼	25
UCC5	1.10	1½	10
UCC6	2.00	2	5
UCC7	3.07	2½	5
UCC8	4.90	3	5
UCC9	6.95	3½	5
UCC10	9.40	4	5

Thin Wall

Schedule CM

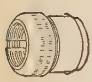
Regular

Cat. No.	Net per 100 Std. Pkg.	Net per 100 Carton	Net per 100 Less Carton	Size Inches	Std. Pkg.	Carton
UCC384	$8.60	$9.10	$9.60	*⅜	200	50
UCC14	6.60	7.00	7.50	½	200	50
UCC24	8.80	9.40	10.00	¾	100	25
UCC34	12.95	13.75	14.65	1	50	10
UCC44	29.40	31.25	33.25	1¼	25	5
UCC54	37.65	40.00	42.65	1½	10	5
UCC64	58.80	58.80	62.50	2	5	5
Watertight						
UCC164	$7.15	$7.65	$8.15	½	200	50
UCC264	9.65	10.25	10.95	¾	100	25
UCC364	14.45	15.40	16.40	1	50	10

*Threaded end is ½ inch; threadless end is ⅜ inch.

Type UCE Threadless Conduit End Bushings

Schedule CR



An easily applied and simple means of bushing the end of either threadless or threaded conduit. Provided with a composition bushing to protect wires leaving end of conduit.

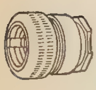
Cadmium-galvanized is the standard finish.

Size In.	Std. Pkg.	Thick Wall Cat. No.	Thick Wall Each	Thin Wall Cat. No.	Thin Wall Each
½	100	UCE19	$.35	UCE14	$.35
¾	75	UCE29	.45	UCE24	.45
1	50	UCE39	.65	UCE34	.65
1¼	40	UCE49	.90	UCE44	.90
1½	20	UCE59	1.25	UCE54	1.25
2	15	UCE69	1.80	UCE64	1.80
2½	10	UCE79	2.55	....	....
3	5	UCE89	5.15	....	....
3½	5	UCE99	6.50	....	....
4	5	UCE109	8.75	....	....

Type UCB Threadless Box Connectors

Schedule CR

Thick Wall



Type UCB Threadless Box Connector is for use in connecting threadless conduit to outlet boxes, panel boxes and switch boxes. Assembles to box with a chase bushing which provides shallow and smoothly bushed outlet for wires on inside of box.

Cadmium-galvanized is the standard finish.

Size Inches	Std. Pkg.	Cat. No.	Each
½	200	UCB1	$.14
¾	100	UCB2	.21
1	50	UCB3	.48
1¼	25	UCB4	.63

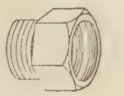
Condulet Self-Threading Connectors and Unions

Schedule CR

Type CCT Self-Threading Connectors and CCU Self-Threading Unions are provided with a male pipe threaded nipple at one end to fit a condulet hub or other standard threaded device. The other end is provided with an especially designed fine thread that cuts its own thread on to the pipe with a water and gastight connection, making a perfect ground bond with the strength of pipe threads.

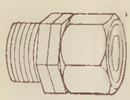
Cadmium-galvanized is the standard finish.

Type CCT Connectors



Cat. No.	Each	Size Inches	Std. Pkg.
CCT1	$.25	½	25
CCT2	.30	¾	25
CCT3	.35	1	25
CCT4	1.10	1¼	10
CCT5	1.40	1½	10

Type CCU Unions



Cat. No.	Each	Size Inches	Std. Pkg.
CCU1	$.75	½	25
CCU2	.85	¾	25
CCU3	1.00	1	25
CCU4	3.50	1¼	10
CCU5	4.50	1½	10

45-Degree Condulet Elbows

Female

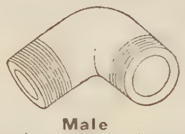
Schedule CE

Cadmium-galvanized is the standard finish.

Cat. No.	Each	Size In.	Std. Pkg.
EL1	$.20	½	200
EL2	.25	¾	100
EL3	.30	1	50
EL4	.65	1¼	25
EL5	.75	1½	10
EL6	1.20	2	5
EL7	2.70	2½	5
EL8	3.15	3	5
EL9	4.95	3½	5
EL10	5.55	4	5

90-Degree Condulet Elbows

Schedule CE



Male

Female

Cadmium-galvanized is the standard finish.

Size Inches	Std. Pkg.	Male Cat. No.	Male Each	Female Cat. No	Female Each
½	200	EL195	$.25	EL19	$.25
¾	100	EL295	.35	EL29	.35
1	50	EL395	.45	EL39	.45
1¼	25	EL495	.75	EL49	.75

Condulet Pedestals

Schedule CR

Threaded

Not Threaded

A rigid support for condulets mounted on conduit that projects through the floor.

Cadmium-galvanized is the standard finish.

Size In.	Std. Pkg.	3 Inches High Cat. No.	3 Inches High Each	6 Inches High Cat. No.	6 Inches High Each
Threaded					
¾	25	Ped223	$1.20	......	.....
1	25	Ped333	1.45	......	.....
1¼	25	Ped443	1.70	......	.....
Not Threaded					
½	25	Ped13	$.95	Ped16	$1.75
¾	25	Ped23	1.20	Ped26	2.00
1	25	Ped33	1.45	Ped36	2.25
1¼	25	Ped43	1.70	Ped46	2.50
1½	25	Ped53	1.95	Ped56	2.75
2	15	Ped63	2.20	Ped66	3.00
2½	15	Ped73	2.45	Ped76	3.25

Bryant New Wrinkle Key Socket Bodies

No. 10, Single-Pole

Cat. No.	Per 100	Watts	Volts	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
10	$18.94	250	250	25	250	44

No. 12, Single-Pole High Capacity

Cat. No.	Per 100	Watts	Volts	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
12	$52.12	660	250	25	250	44

No. 13 Bryant New Wrinkle Keyless Socket Bodies

660 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
13	$16.84	25	250	35

No. 15 Bryant New Wrinkle Single-Pole Pull Socket Bodies

250 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
15	$25.26	25	250	42

No. 34 Bryant New Wrinkle Single-Pole Push Button Socket Bodies

660 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
34	$21.06	25	250	34

Bryant New Wrinkle Pull Switch Bodies

Nos. 20 and 27

No. 25

No. 20 Single-Pole

3 Amperes, 125 Volts
1 Ampere, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
20	$78.70	10	20	4

No. 50 Single-Pole

6 Amperes, 125 Volts
3 Amperes, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
50	$92.00	10	20	4

No. 25 Single-Pole

3 Amperes, 125 Volts
1 Ampere, 250 Volts

Size cord hole in composition bushing, 13/32 inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
25	$82.64	10	20	4

No. 27 Electrolier

3 Amperes, 125 Volts
1 Ampere, 250 Volts

Operating 1, 2, 1 and 2 off.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
27	$123.24	10	20	4

No. 29 Bryant New Wrinkle Spartan Receptacle Bodies

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
29	$33.42	5	20	2

No. 631 Bryant Keys for Brylock Sockets

Cat. No.	Per 100	Carton	Weight Pounds per Carton
631	$50.50	1	......

Bryant New Wrinkle Brass Caps

No. AA

No. AM

No. AQ

No. AT

No. CX

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
No. AA 1/8-Inch Female				
AA	$8.42	25	250	13
No. AB 1/4-Inch Female				
AB	$26.14	25	25	2
No. AC 3/8-Inch Female				
AC	$11.02	25	100	6
No. AD 1/2-Inch Female				
AD	$31.04	25	50	4
No. AG 3/8-Inch Male				
AG	$26.14	25	50	2
No. AM 1/8-Inch Female Angle				
AM	$34.30	25	50	3
No. AP 3/8-Inch Female Angle				
AP	$39.18	25	25	2
No. AQ Cord Grip For 3/8 to 1/2-inch cords.				
AQ	$22.28	25	100	8
No. AT Pendent Cap With Templus bushing; 13/32-inch hole.				
AT	$8.42	25	250	8
No. AU Strain Relief Pendent Cap With porcelain bushing; 13/32-inch hole.				
AU	$14.84	25	100	4
No. CX 1/8-Inch Female With side entrance bushing. Dimension of cord hole, 5/16x3/16 inch.				
CX	$10.42	25	100	5

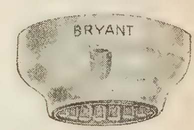
Bryant New Wrinkle Brass Bases

No. BL

Cat. No.	Per 100	O. D. Base In.	Supporting Screw Spacings Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
No. BL 3¼-Inch Box Base						
BL	$54.94	3⅝	2, 2¾	10	50	25
No. BM 4-Inch Box Base						
BM	$99.48	4 21/32	2¾, 3½	5	50	45

Bryant New Wrinkle Porcelain Bases

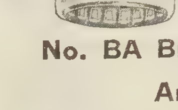
No. AX



No. AZ

Cat. No.	Per 100	O. D. Base Inches	Supporting Screw Spacing Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
No. AX Slotted Base						
AX	$26.72	2 1/16	1⅛	10	100	19
No. AY Small Concealed Base						
AY	$26.72	2 1/16	1⅛	10	100	18
No. AZ Large Concealed Base Fits Type 500 Adaptiboxes, Types GN, HM, and W Octagonal Unilets and Size 10 Round Opening Pipe Taplets.						
AZ	$34.16	2¾	2¼	10	100	32

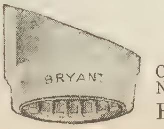
No. AW Bryant New Wrinkle Porcelain Cleat Bases



Supporting screw spacing, 2 5/32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
AW	$34.16	10	100	29

No. BA Bryant New Wrinkle Porcelain Angle Concealed Bases



Screw spacings, 1⅛ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
BA	$34.16	10	100	22

Hemco Brass Shell Sockets

Standard Size

No. HT10

No. HA30

No. HA15

Key Sockets

250 Watts, 250 Volts

Cat. No.	Per 100 — Brush Brass	Per 100 — Bright Dipped	Per 100 — Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA10	$17.90	$16.90	$21.90	⅛-Inch Cap..	25	250	53
HT10	17.90	16.90	21.90	Pendent Cap..	25	250	46
HX10	19.90	18.90	23.90	⅛-Inch Cap, Side Outlet.	25	250	53

Turn Knob Sockets

250 Watts, 250 Volts

Cat. No.	Brush Brass	Bright Dipped	Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA30	$17.90	$16.90	$21.90	⅛-Inch Cap..	25	250	53
HT30	17.90	16.90	21.90	Pendent Cap..	25	250	46
HX30	19.90	18.90	23.90	⅛-Inch Cap, Side Outlet.	25	250	53

Pull Sockets

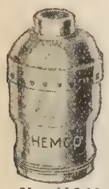
250 Watts, 250 Volts

Cat. No.	Brush Brass	Bright Dipped	Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA15	$23.16	$22.16	$27.16	⅛-Inch Cap..	25	250	52
HT15	23.16	22.16	27.16	Pendent Cap..	25	250	48
HX15	25.16	24.16	29.16	⅛-Inch Cap, Side Outlet.	25	250	56

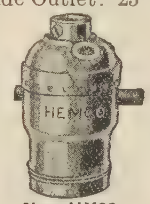
Push Sockets

250 Watts, 250 Volts

Cat. No.	Brush Brass	Bright Dipped	Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA32	$18.94	$17.94	$22.94	⅛-Inch Cap..	25	250	45
HT32	18.94	17.94	22.94	Pendent Cap..	25	250	41
HX32	20.94	19.94	24.94	⅛-Inch Cap, Side Outlet.	25	250	56



No. HA13



Nos. HX32 and HX34

Keyless Sockets

660 Watts, 250 Volts

Cat. No.	Brush Brass	Bright Dipped	Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA13	$15.78	$14.78	$19.78	⅛-Inch Cap..	25	250	46
HT13	15.78	14.78	19.78	Pendent Cap..	25	250	42
HX13	17.78	16.78	21.78	⅛-Inch Cap, Side Outlet.	25	250	51

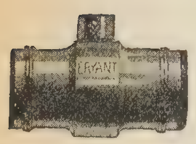
Push Sockets

660 Watts, 250 Volts

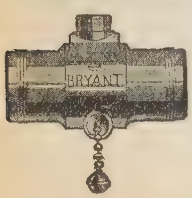
Cat. No.	Brush Brass	Bright Dipped	Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA34	$20.00	$19.00	$24.00	⅛-Inch Cap..	25	250	45
HT34	20.00	19.00	24.00	Pendent Cap..	25	250	41
HX34	22.00	21.00	26.00	⅛-Inch Cap, Side Outlet.	25	250	56

No bodies or caps are sold separately.

Bryant Twin Sockets



No. 46750



Nos. 4051 and 4005

Keyless Sockets

Each Outlet 660 Watts, 250 Volts

Length of sockets, 2¹¹⁄₁₆ inches.

Cat. No.	Per 100	Bushing In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
46750	$80.80	⅛	10	10	2
46751	80.80	⅜	10	10	2

Pull Sockets

Length, 3³⁄₁₆ inches.

Combined Load 250 Watts, 250 Volts

Both outlets controlled simultaneously.

Cat. No.	Per 100	Bushing In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4051	$119.18	⅛	10	10	3
4052	131.30	⅜	10	10	3

Each Outlet 250 Watts, 250 Volts

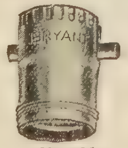
First pull, outlet No. 1 alone; 2nd pull, both outlets in multiple; 3rd pull, No. 1 off, No. 2 on; 4th, both off.

Cat. No.	Per 100	Bushing In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4005	$135.34	⅛	10	10	3
4006	147.46	⅜	10	10	3

Bryant Wrinklet Electrolier Socket Bodies

No. 80

No. 85



No. 81

No. 95

Cat. No.	Per 100	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
No. 80 Single-Pole Key — 250 Watts, 250 Volts				
80	$18.94	25	250	35
No. 81 Single-Pole Push-Button — 660 Watts, 250 Volts				
81	$21.06	25	250	30
No. 85 Single-Pole Pull — 250 Watts, 250 Volts				
85	$25.26	25	250	35
No. 95 Single-Pole Keyless Short Pattern — 660 Watts, 250 Volts				
95	$14.74	25	250	23

Bryant Wrinklet Electrolier Caps

No. WA

No. WE

No. WP

No. WT

No. WX

Cat. No.	Per 100	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
No. WA ⅛-Inch Female				
WA	$8.42	25	250	10
No. WB ¼-Inch Female				
WB	$26.14	25	25	2
No. WC ⅜-Inch Female				
WC	$17.90	25	50	3
No. WE ⅛-Inch Male				
WE	$16.34	25	25	1
No. WG ⅜-Inch Male				
WG	$26.14	25	25	1
No. WM ⅛-Inch Female Angle				
WM	$34.30	25	50	3
No. WP ⅜-Inch Female Angle				
WP	$39.18	25	25	2
No. WT Pendent Cap — With ¹³⁄₃₂-inch hole.				
WT	$8.42	25	50	2
No. WX ⅛-Inch Female — With side entrance bushing.				
WX	$10.42	25	50	2

Hemco Brass Shell Sockets

Electrolier Size

No. HA95

Nos. HX81 and HX82

Keyless Sockets

660 Watts, 250 Volts

Cat. No.	Per 100 — Brush Brass	Per 100 — Bright Dipped	Per 100 — Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA95	$13.68	$12.68	$17.68	⅛-Inch Cap..	25	250	32
HT95	13.68	12.68	17.68	Pendent Cap..	25	250	32
HX95	15.68	14.68	19.68	⅛-Inch Cap, Side Outlet.	25	250	32

Push Sockets

660 Watts, 250 Volts

Cat. No.	Brush Brass	Bright Dipped	Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA81	$20.00	$19.00	$24.00	⅛-Inch Cap..	25	250	42
HT81	20.00	19.00	24.00	Pendent Cap..	25	250	42
HX81	22.00	21.00	26.00	⅛-Inch Cap, Side Outlet.	25	250	42

250 Watts, 250 Volts

Cat. No.	Brush Brass	Bright Dipped	Nickel or Gun Metal	Style Cap	Car-ton	Std. Pkg.	Pkg. Wt., Lbs.
HA82	$18.94	$17.94	$22.94	⅛-Inch Cap..	25	250	42
HT82	18.94	17.94	22.94	Pendent Cap..	25	250	42
HX82	20.94	19.94	24.94	⅛-Inch Cap, Side Outlet.	25	250	42

Bryant Brass Titan Socket Caps and Bodies

No. TA-4315 Showing Method of Fastening Shell to Cap

The connection between the socket body and cap is effected by means of a threaded ring which engages with a corresponding thread in the shell.

The threaded ring is packed with the socket body.

Each cap will fit all bodies.

No. TA

No. TT

Titan Brass Caps

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
TA	$8.08	⅛-Inch Cap	25	250	17
TB	19.80	¼-Inch Cap	25	100	12
TC	14.14	⅜-Inch Cap	25	100	12
TJ	18.38	Cord Grip ¼ to ⅜-Inch Cap	25	100	7
TQ	18.38	Cord Grip ⅜ to ½-Inch Cap	25	100	7
TT	8.08	Pendent Cap	25	250	13

Titan Brass Socket Bodies with Rings (without Caps)

250 Watts, 250 Volts

4310	$28.28	Key, Single-Pole	25	250	44
4315	40.40	Pull, Single-Pole	25	250	41

High Capacity—660 Watts, 250 Volts

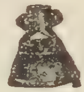
4312	$48.22	Key, Single-Pole	25	250	48
4313	25.26	Keyless	25	250	35
4314	28.28	Push-Button	25	250	40

Bryant Templus Titan Socket Bodies and Caps

Titan Caps

No. LA

No. LC



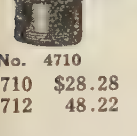
No. LG

No. LT

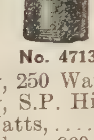
Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg
LA	$8.08	⅛-Inch Female Cap	10	100	5
LC	14.14	⅜-Inch Female Cap	10	100	6
LG	18.38	Cord Grip Cap for ⅜ to ½-Inch Cord	10	100	4
LT	8.08	Pendent Cap	10	100	6

Titan Bodies with Rings (without Caps)

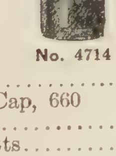
250 Volts



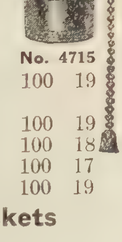
No. 4710



No. 4713



No. 4714

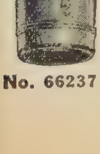


No. 4715

4710	$28.28	Key, 250 Watts	10	100	19
4712	48.22	Key, S.P. High Cap, 660 Watts,	10	100	19
4713	25.24	Keyless, 660 Watts	10	100	18
4714	28.28	Push, 660 Watts	10	100	17
4715	40.40	Pull, 250 Watts	10	100	19

Bryant Electrolier Keyless Sockets

660 Watts, 250 Volts



No. 66237

The cap and shell screw together.
Standard finish is brush brass.

Cat. No.	Per 100	Cap In.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
66237	$56.56	⅛	50	250	39
50766	65.04	⅜	10	100	17

Bryant Interchangeable Cold Molded Black Composition Socket Caps and Bodies

These sockets, made of black composition, are suitable for installation in many cases where metal shell sockets may not prove satisfactory. Each cap will fit either body.

Socket Caps

FA

FQ

FT

Wash nickel is standard finish on exposed metal parts.

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
FA	$22.62	⅛-Inch Metal Bushing	10	100	14
FC	27.14	⅜-Inch Metal Bushing	10	100	15
FQ	28.28	Cord Grip ⅜ to ½-Inch	10	100	17
FT	11.32	Pendent Cap	10	100	11

Socket Bodies

With Groove for Weatherproof Shade-Holders

No. 3770

No. 3773

3770	$29.42	Key, 250 Watts, 250 Volts	10	100	26
3773	26.02	Keyless, 660 Watts, 250 Volts	10	100	17

Bryant Bayonet (Edi-Swan) Medium Base Devices

660 Watts, 250 Volts, (Not N. E. C.)

Keyless Socket with Shade-Holder Ring

Complete with ⅛-inch French thread cap (11 m/m 7½ threads per c/m).

Regular finish is plain brass dipped, which will be furnished when no finish is specified. All other finishes, including brush brass and polished brass are special.

Brush brass will be charged at same price as polished brass.

Sockets similar to No. 567 can be supplied with caps of any thread, other than the one listed, on orders of sufficient size. Prices of such sockets will be quoted on application when specifications are given.

Cat. No.	Per 100	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
567	$42.42	25	250	30

Composition Attachment Plug

Cord hole elongated, $\frac{7}{32}$x$\frac{5}{16}$ inch.

570	$24.24	25	100	10

Ediswan to Spartan Composition Adapter

707	$24.24	25	100	5

No. 3707 Bryant Porcelain Lined Aluminum Heavy Duty Sockets

With Shade-Holder Threads

660 Watts, 660 Volts

Unassembled

The aluminum shell is threaded on the end to receive a special shadeholder, No. 3700.

This device is fitted with lanced screw shell which prevents loosening of lamps from vibration.

Diameter of body, 1$\frac{21}{32}$ inches.

Length, 2$\frac{21}{32}$ inches.

Diameter of shade-holder flange, 1$\frac{31}{32}$ inches.

Carton, 10. Standard package, 50; weight, 20 pounds.

No. 3707, ½-Inch Female Cap. per 100 **$70.70**

Bryant Candelabra Sockets

75 Watts, 125 Volts

Pull Candle Socket

Composition with Paper Jacket and Female Thread Bushing

With Jacket On

The bushing of this socket is threaded for ⅛-inch iron pipe, .405-inch outside diameter, 27 threads per inch.

The standard chain is No. 3 size and extends 5 inches below the composition. The standard finish of chain is brush brass, but polished or dull nickel finish will be furnished without extra charge.

Outside diameter, 13⁄16 inch. Length over all, 2 15⁄32 inches. Regularly supplied with a paper insulating jacket which covers the mechanism and screw shell. Outside diameter of jacket, 29⁄32 inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
540	$106.06	25	50	4

Key Socket with Wrinkle Style Shell Fastening

With ⅛-Inch Cap

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
434	$48.42	25	100	10

Keyless Socket with Threaded Shell Fastening

With ⅛-Inch Cap

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
321	$41.10	25	100	7

Pull Socket with Wrinkle Style Shell Fastening

With ⅛-Inch Cap

The standard length of chain is 4 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
386	$77.78	10	50	5

Composition Decorative Socket

With Pendent Cap

Made in green composition and fitted with 6 inches of No. 18 B. & S. green braid, stranded rubber-covered wire.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
323	$24.88	25	100	4

Porcelain Keyless Socket

With Male Thread Stud

Supporting stud is 5⁄16 inch outside diameter, 27 threads per inch.

Outside diameter of porcelain, 11⁄16 inch. Length of porcelain, 1⅛ inches; length over all, 1⅜ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
328	$29.70	50	100	4

With Female Thread Bushing

Bushing is threaded for ⅛-inch iron pipe, .405-inch outside diameter, 27 threads per inch.

Outside diameter of porcelain, 11⁄16 inch. Length of porcelain 1⅛ inches; length over all, 1 25⁄32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
347	$23.02	50	100	5

Bryant Miniature and Candelabra Receptacles

75 Watts, 125 Volts

Cleat Base

Candelabra

No. 367

Outside diameter of base, 1 9⁄32 inches. Thickness of base, ½ inch. Height, 1⅛ inches. Supporting screw spacing, 1 1⁄16 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
367	$18.66	25	100	10

Miniature

No. 9445

Outside diameter of base, 1 3⁄16 inches. Thickness of base, 9⁄32 inch. Height, ¾ inch. Supporting screw spacing, 15⁄16 inch.

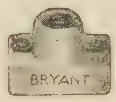
Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*9445	$14.00	25	200	9

Candelabra

Outside diameter of base, 1 11⁄32 inches. Thickness of base, 5⁄16 inch. Height, ⅞ inch. Supporting screw spacing, 1 1⁄16 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9446	$14.00	25	200	13

Candelabra with Oblong Base



No. 325

Base, 1 9⁄16x1 inch. Thickness of base, 17⁄32 inch. Height, 1 9⁄32 inch. Supporting screw spacings, 1 7⁄32 by 19⁄32 inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Porcelain Base				
325	$15.56	25	100	10
Composition Base				
*612	$35.36	10	100	9

Miniature for Metal Signs

No. 612

The hole required for this receptacle is 21⁄32 inch in diameter.

Depth, 13⁄16 inch. Supporting screw spacing, 1 1⁄16 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
387	$28.00	10	100	8

Candelabra for Metal Signs

No. 388

Size hole required, ¾ inch in diameter.

Depth, 1 inch. Screw spacing, 1 3⁄16 inches.

The wires clear the supporting surface by 13⁄16 inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
388	$28.00	10	100	8

With Removable Ring for Metal Signs

Miniature

Size hole required, ¾ inch in diameter.

Diameter, 1 3⁄16 inches. Depth, ⅝ inch.

Thickness of ring, ¼ inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
389	$31.10	25	100	8

No. 390

Candelabra

Size hole required, ¾ inch in diameter.

Diameter, 1 3⁄16 inch. Depth, ⅞ inch.

Thickness of ring, ¼ inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
390	$28.28	25	100	9

Candelabra for Wooden Signs

No. 25705

Size hole required, 15⁄16 inch in diameter.

Thickness of back, ⅝ inch. Diameter of back, 1⅜ inches. Length of neck, ⅞ inch. Supporting screw spacing, 1 5⁄32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*25705	$37.32	10	100	12

*Not listed as standard by Underwriters' Laboratories.

Bryant Insulating and Splicing Links

No. 811

No. 513

Standard finish is brush brass, which will be supplied when no other finish is specified.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
513	$11.32	Insulating Link for No. 3 or No. 6 Chain................	100	100	½
810	3.54	Splicing Link to Connect No. 6 Chain to Small Cord.....	200	200	¼
811	3.54	Splicing Link for No. 3 Chain..	200	200	½

Bryant Intermediate Base Sockets

Socket Caps

No. IA

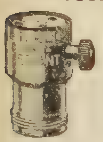
No. IT

No. IM

⅛-Inch

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt. Lbs.
IA	$12.12	25	100	3
Pendent				
IT	$12.12	25	100	2
⅛-Inch Angle				
IM	$29.70	25	50	4

Socket Bodies


No. 4610

No. 4613

No. 4615

Key
75 Watts, 125 Volts

4610	$36.30	25	100	8

Keyless
75 Watts, 250 Volts

4613	$25.26	25	100	8

Pull
75 Watts, 125 Volts

4615	$58.58	25	100	7

Above caps and bodies are Wrinkle type and are interchangeable.

Standard finish is brush brass. Standard length of chain on pull socket bodies is 4½ inches.

Candle Pull Sockets
75 Watts, 125 Volts

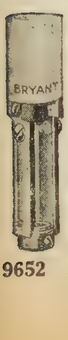
Composition, with paper jacket.

Has ⅛-inch female thread bushing.

Outside diameter of sleeve, 29/32 inch; over-all length, 2 17/32 inches. Standard length of chain, 5 inches.

9640	$106.06	25	100	8

Keyless Candle Sockets
75 Watts, 250 Volts



Composition.

Has ⅛-inch female thread bushing.

Adjustable, 3½ to 5 inches long. Outside diameter of paper jacket, ⅞ inch.

9652	$20.20	25	100	9

Green Templus Pendent Sockets
75 Watts, 250 Volts

Weatherproof.

Has 5-inch leads of No. 18 stranded rubber covered weatherproof wire.

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt. Lbs.
9650	$16.96	25	100	4

Porcelain Cleat Receptacles
75 Watts, 250 Volts

For surface wiring. Diameter base, 1½ in.; over lugs, 1⅞ in.; overall height, 1 7/16 in.; screw spacing, 1 7/16 in.

9653	$16.96	25	100	15

Porcelain Sign Receptacles
75 Watts, 250 Volts

No. 9663

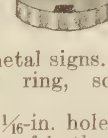
For metal signs.

Two screw mounting, screw terminals.

Fits 1-inch holes. Depth of back, 1 9/32 in. Equipped with No. 8-32, ½-in. long, bronze supporting screws spaced 1⅜ in.

9663	$16.96	25	100	13

No. 9690



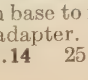
For metal signs.

Screw ring, screw terminals.

Fits 1 1/16-in. holes; outside diameter of both screw ring and body, 1⅜ in. Depth of back, 1 inch.

9690	$16.96	25	100	15

Adapters



Medium base to intermediate base adapter.

9691	$14.14	25	100	4

Bryant Prefocusing Sockets and Receptacles

No. 3740

These devices are used with low voltage lamps, for instance, 12 volts for airplane installation and 32 volts for landing fields. Other lamps used are 110-watt 115-volt T8½ bulb and 200-watt 115-volt T10 bulb coiled coil-filament projection lamps. These wattages represent the largest demand.

No. 3741

For Medium Prefocusing Lamps
660 Watts, 250 Volts

Black Composition, for Surface or Concealed Wiring

Cat. No.	Per 100	Height Over All Inches	Screw Centers Inches	Diam. Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3740	$127.26	1⅞	2	...	10	100	30
Black Lacquered Porcelain, Pendent Type Cap							
3741	$94.74	2 5/16	..	1¾	10	100	38
3742	90.80	1⅞	15/16	1¾	10	100	38

For Mogul Prefocusing Lamps
2500 Watts, 250 Volts

No. 3841

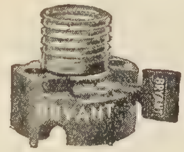
No. 3842

Cat. No.	Per 100	Height Over All Inches	Screw Centers Inches	Diam. Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Black Lacquered Porcelain							
3841	$353.50	4	..	*2 3/16	5	50	64
3842	353.50	2 13/16	3	...	5	50	50

*Diameter including flare, 2 13/16 inches.

Bryant Marine, Railway and Industrial Lamp Receptacles

Heavy Duty


No. 4160

With Templus Base and Lamp Grip

Diameter of base, 2 inches. Height, 1 13/16 inches. Supporting screw spacing, 1⅜ inches.

Key receptacle, center of base to end of key, 1 11/16 inches.

Single Pole Key, 250 Watts, 250 Volts

Regularly supplied with two 1-inch 8x32 round head pointed brass screws.

Center of base to end of key, 1 11/16 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4160	$49.50	10	100	25

No. 4161

Keyless, 660 Watts, 250 Volts

Regularly supplied with two ¾-inch 8x32 round head pointed brass screws.

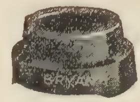
4161	$35.36	10	100	24

Templus Screw Shell Insulator

For Nos. 4160 and 4161.

Has screw mounting.

4260	$31.82	10	100	6

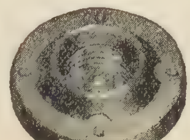

No. 4260

Watertight Keyless Receptacle
With Composition Base
660 Watts, 250 Volts

Has one binding screw on each terminal.

Diameter, 2¾ inches. Height over all 1¾ inches. Height above mounting surface, ⅞ inches. Supporting screw spacing, 2 5/16 inches. There are four supporting screw holes spaced 90° apart. Screws for mounting not furnished.

Regularly furnished without sealing compound over terminal plates and fastening screws.


No. 4146

4146	$49.50	10	100	36

Bryant Porcelain Socket Bodies

No. 70

No. 71

No. 70 Single-Pole Key

250 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
70	$29.42	10	100	26

No. 71 Push-Button

660 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
71	$41.00	10	100	30

No. 73

No. 75

No. 73 Keyless

660 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
73	$26.02	10	100	16

No. 75 Single-Pole Pull

250 Watts, 250 Volts

No. 513 Insulating Link is inserted in the chain.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
75	$66.74	10	100	31

Bryant Porcelain Caps

No. PA

No. PP

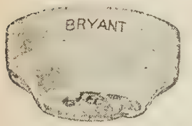
No. PQ

No. PT

No. RT

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
No. PA 1/8-Inch Female Brass				
PA	$22.62	10	100	13
No. PC 3/8-Inch Female Brass				
PC	$27.14	10	100	14
No. PD 1/2-Inch Female Brass				
PD	$38.18	10	100	12
No. PP 3/8-Inch Female Brass Angle				
PP	$85.00	10	100	23
No. RW 1/2-Inch Female Brass Angle				
RW	$90.00	10	100	28
No. PQ Cord Grip — For from 3/8 to 1/2-inch cord.				
PQ	$28.28	10	100	18
No. PT Pendent — With 13/32-inch cord hole.				
PT	$11.32	10	100	11
No. RT Pendent — With 1/2-inch cord hole.				
RT	$11.32	10	100	13

Bryant Porcelain Bases



No. PZ

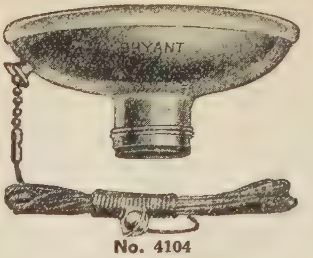
No. RL

No. PZ Concealed Base

This base will fit Type No. 500 Adaptibox.

Cat. No.	Per 100	O. D. Inches	Supporting Screw Spacings Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
PZ	$21.22	2 3/4	1 1/8, 2 1/4	10	100	37
No. RL 3 1/4-Inch Box Base						
RL	$33.94	3 5/8	2 3/4	10	50	22
No. RM 3 1/4 and 4-Inch Box Base						
RM	$45.24	4 7/16	2 3/4, 3 1/2	5	50	37

Bryant Surface and Outlet Box Receptacles



No. 4104

With Binding Screws

These receptacles are flat on the back and are therefore suitable for use either on outlet boxes or without them. They are also approved for use on walls or ceilings containing metal lathing and upon metal surfaces.

For 3 1/4-Inch Outlet Boxes

Diameter of base, 3 5/8 inches. Height, 1 17/32 inches. Supporting screw spacing, 2 3/4 inches.

Cat. No.	Per 100	Description	Watts	Volts	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4102	$70.00	Keyless........	660	250	1	50	29

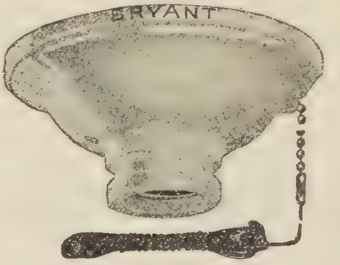
For 3 1/4 and 4-Inch Outlet Boxes

Diameter of base, 4 21/32 inches. Height, keyless, 1 17/32 inches; pull, 2 inches. Supporting screw spacings, 2 3/4 and 3 1/2 inches.

Cat. No.	Per 100	Description	Watts	Volts	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4100	$84.84	Keyless........	660	250	1	50	43
4104	183.82	Pull...........	250	250	1	50	60

Bryant Porcelain Outlet Box Receptacles

With Shade-Holder Groove



No. 4278

Can be mounted on standard 3 1/4 and 4-inch outlet boxes.

Diameter of base, 4 5/8 inches. Height, 2 5/32 inches. Supporting screw spacing, 2 3/4 to 3 1/2 inches on centers.

Pull chain receptacles are fitted with nickel chains and tassel pendants but will be furnished with brush brass chains at no extra charge.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Keyless—600 Watts, 250 Volts					
4273	$78.78	Keyless Receptacle.......	1	50	62
Pull—250 Watts, 250 Volts					
4275	$137.36	6 1/2-Inch Chain...........	1	50	58
4278	141.40	6 1/2-Inch Chain, 4-Foot Cord..................	1	50	56

Bryant Porcelain Receptacles for Outlet Boxes

660 Watts, 600 Volts

The hole required for this receptacle is 1 11/16 inches in diameter.

Diameter over lugs, 2 5/8 inches.

Depth, 1/2 inch.

Supporting screw spacing, 2 1/8 inches.

Furnished with 6 inch wire leads.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
59107	$20.20	10	100	34

Bryant Porcelain Receptacles for 3¼-Inch Outlet Boxes

No. 4110

660 Watts, 600 Volts

Furnished with 6-inch wire leads.

Longer wire leads furnished at 9 cents extra per foot each conductor.

Machine screws for mounting are furnished.

With Black Japanned Flat Cover

Cat. No.	Per 100	Out. Diam., In.	Screw Spacings, In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4110	$21.06	3½	2¾	1	100	58

Bryant Porcelain Receptacles for 4-Inch Outlet Boxes

No. 4113

660 Watts, 600 Volts

Furnished with 6-inch wire leads. Longer wire leads furnished at 9 cents extra per foot each conductor.

Machine screws for mounting are furnished.

With Black Japanned Raised Cover

Cat. No.	Per 100	Outside Diam., In.	Screw Spacings, In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4113	$23.16	4⅛	3½	1	100	78

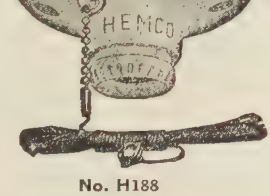
Hemco Outlet Box Receptacles

No. H73

No. H227

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
H73	$15.78	With Binding Screws, for 3¼-Inch Box	10	100	49
H74	17.90	With Binding Screws, for 4-Inch Box	5	100	63
H227	16.84	For 3¼-Inch Box	5	100	62
H228	21.06	For 4-Inch Box	5	50	43

No. H167



No. H188

For 3¼-Inch Outlet Box

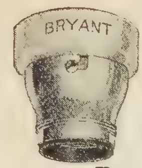
H165	$27.36	6-Inch Chain, Fluted Ring	10	50	40
H167	31.58	Chain and Ins., Fluted Ring	10	50	37
H168	31.58	Chain and Cord, Fluted Ring	10	50	38

For 4-Inch Outlet Box

H185	$38.00	6-Inch Chain, Fluted Ring	10	50	64
H187	42.00	Chain and Ins., Fluted Ring	10	50	66
H188	42.00	Chain and Cord, Fluted Ring	10	50	66

No. 50717 Bryant Pony Wall Keyless Sockets

With Base for Concealed Work

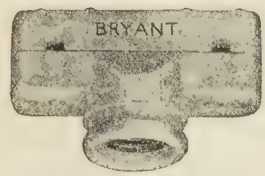


660 Watts, 250 Volts

Diameter of base, 2 inches. Height, 2 inches. Supporting screw spacing, 1¼ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
50717	$37.12	10	100	22

Bryant Porcelain Cleat Receptacles



With Shade-Holder Groove

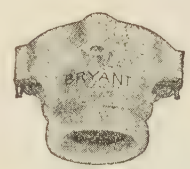
660 Watts, 250 Volts

Length, 3$\frac{15}{16}$ in. Width, 1 in. Height, 2¼ in. Supporting screw spacings, $\frac{7}{16}$ by $\frac{31}{32}$ inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
58300	$43.56	5	100	55

Bryant Porcelain Cleat Receptacles

660 Watts, 250 Volts



No. 4013

With Shade-Holder Groove

Diameter main base, 2$\frac{11}{32}$ inches; over lugs, 2⅞ inches. Height, 1$\frac{21}{32}$ inches. Screw spacing, 2$\frac{5}{16}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4013	$34.22	10	100	32

Without Shade-Holder Groove

Diameter main base, 2$\frac{11}{32}$ inches; over lugs, 2⅞ inches. Height, 1$\frac{21}{32}$ inches. Screw spacing, 2$\frac{5}{16}$ inches.

9402	$26.44	10	100	37

No. 9403

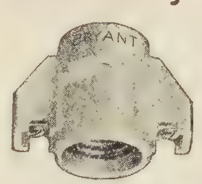
With Brass Shell for Uno and Other Shade-Holders

Diameter main base, 2$\frac{11}{32}$ inches; over lugs, 2⅞ inches. Height, 1⅝ inches. Screw spacing, 2$\frac{5}{16}$ inches.

9403	$42.00	10	100	32

No. 59275 Bryant Porcelain Cleat Receptacles

660 Watts, 250 Volts



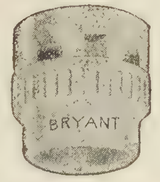
Raises wires 1 inch from surface.

Diameter over lugs, 2$\frac{21}{32}$ inches. Height, 1$\frac{19}{32}$ inches. Supporting screw spacing, 2 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg
59275	$35.36	10	100	35

No. 4229 Bryant Porcelain Receptacles

660 Watts, 250 Volts



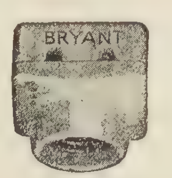
For Cleat or Concealed Wiring

Diameter base, 2⅛ inches. Height, 1⅞ inches. Holes for supporting screws are elongated to provide 1⅜ to 1⅝ in. on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4229	$22.00	10	100	35

Bryant Porcelain Wood Molding Receptacles

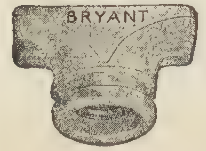
660 Watts, 250 Volts



No. 42453

Length, 2$\frac{5}{16}$ inches. Width, 2⅛ inches. Height, 1$\frac{11}{16}$ inches. Supporting screw spacing, 1$\frac{13}{16}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
42453	$38.88	10	100	46



No. 4026

With Shade-Holder Groove

Length, 2⅞ inches. Width, 1$\frac{11}{16}$ inches. Height, 1$\frac{11}{16}$ inches. Supporting screw spacing, 2$\frac{9}{32}$ inches.

4026	$54.44	10	100	31

No. 9171 Bryant Porcelain Cleat Receptacles

660 Watts, 250 Volts, Not N. E. C.

Diameter of base, $1\frac{15}{16}$ inches.
Height, $1\frac{1}{2}$ inches.
Supported by one screw in the center.

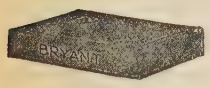
Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9171	$12.64	10	100	24

Bryant Double End Porcelain Receptacles

For Concealed, Cleat, or Molding Work

660 Watts, 250 Volts

No. 4248



No. 4249

For use with metal reflectors.

The receptacle will take up to 100-watt lamps, and, when used with No. 4249 Sub-Base, up to 150-watt lamps.

Mounting screw holes are staggered, centers 1 inch on width and $1\frac{1}{8}$ inches on length.

Medium Base, Keyless

Size of base, $2\frac{1}{4}$x$1\frac{3}{4}$ inches. Height, $2\frac{1}{2}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4248	$56.56	10	100	60

Porcelain Sub-Base

Size of base, $2\frac{1}{4}$x$1\frac{3}{4}$ inches. Thickness, $\frac{3}{8}$ inch.

4249	$10.60	10	100	12

Bryant Outlet Box Receptacles

660 Watts, 250 Volts

No. 9397

Base, 2x$1\frac{3}{8}$ inches. Height, $1\frac{1}{2}$ inches. Supporting screw spacing, $1\frac{1}{2}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*9397	$24.04	10	100	15

2-Piece, Flush

No. 9514

Hole required, $1\frac{9}{16}$ inches in diameter. Flange, $2\frac{1}{4}$ inches in diameter, $\frac{11}{32}$ inch thick. Depth from back of flange, $1\frac{25}{32}$ inches. Supporting screw spacing, $1\frac{7}{8}$ inches.

9514	$42.42	10	100	32

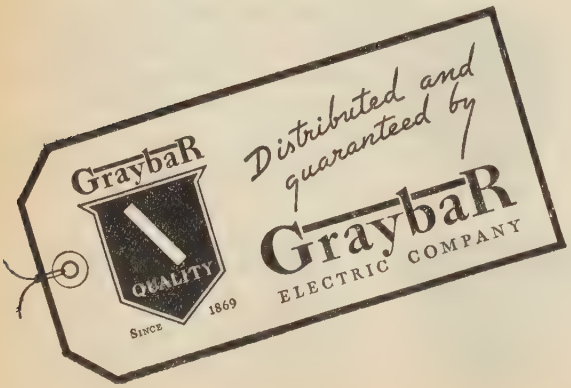
With Marine Screw Shell

No. 22287

Outside diameter of base, $2\frac{5}{8}$ inches. Supporting screw spacings, 2 to $2\frac{3}{16}$ inches. The marine screw shell is formed of a coil of wire and has the advantage of holding the lamp base firmly in places subject to vibration.

*22287	$59.90	10	100	37

*Not listed as standard by Underwriters' Laboratories.



Bryant Porcelain Weatherproof Sockets

With Die Cast Caps

660 Watts, 250 Volts

Carton, 10. Standard package, 100.

With Straight Cap

No. 9454

Cat. No.	Per 100	Cap In.	Diam. In.	Length Bodies In.	Length Over All In.	Pkg. Wt. Lbs.
9418	$18.94	$\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{11}{16}$	$2\frac{1}{4}$	14
9419	18.94	$\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{11}{16}$	$2\frac{1}{4}$	14
9420	22.10	$\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{11}{16}$	$2\frac{1}{4}$	11
9421	18.94	$\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{11}{16}$	$2\frac{1}{4}$	12

With Angle

9422	$27.36	$\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{11}{16}$	$2\frac{13}{16}$	12
9423	27.36	$\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{11}{16}$	$2\frac{13}{16}$	16

With Hexagon Straight Cap

9454	$35.36	$\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{11}{16}$	$2\frac{1}{4}$	16

Bryant Porcelain Weatherproof Sockets

660 Watts, 600 Volts

These devices are regularly fitted with 6-inch leads of No. 14 A.W.G. stranded rubber covered wire.

Main diameter, $1\frac{1}{2}$ inches. Flange diameter, $1\frac{5}{8}$ inches. Length of porcelain, $1\frac{15}{16}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
399	$13.68	10	100	26

With Shade-Holder Groove

Main diameter, $1\frac{1}{2}$ inches. Flange diameter, $1\frac{5}{8}$ inches. Length of porcelain, $1\frac{3}{4}$ inches.

9366	$20.00	10	100	28

Bryant Porcelain Weatherproof Bragdon Sockets

660 Watts, 600 Volts

With Shade-Holder Groove

Main diameter, $1\frac{5}{8}$ inches. Diameter of skirt, $2\frac{11}{16}$ inches. Length, $2\frac{29}{32}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
50997	$77.78	10	100	52

Bryant Composition Weatherproof Sockets

660 Watts, 600 Volts

With Shade-Holder Groove

No. 43310

Main diameter tapers from $1\frac{9}{16}$ to $1\frac{7}{16}$ inches. Flange diameter, $1\frac{5}{8}$ inches. Length of composition, $2\frac{3}{16}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
60666	$19.00	10	100	26

Pony Size, With Shade-Holder Groove

Main diameter, $1\frac{9}{16}$ inches. Flange diameter, $1\frac{5}{8}$ inches. Length of composition, 2 inches.

43310	$18.00	10	100	21

No. H310 Hemco Templus Weatherproof Sockets

Pony Size

With Shade-Holder Groove

660 Watts, 600 Volts

With 6-inch leads.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
H310	$12.00	10	100	13

Bryant Porcelain Receptacles

For Outlet Boxes, Metal Signs and Lighting Units

No. 61988

The hole required for each of these receptacles is 1½ inches in diameter. Diameter of receptacles, 1¾ inches. Diameter of rings, 1¾ inches.

Carton, 10. Standard package, 100.

Deep Receptacles with Shallow (½-Inch) Ring and 1 Lug

660 Watts, 600 Volts

Cat. No.	Per 100	Description	Separation In.	Depth Back In.	Wt., Lbs. Std. Pkg.
61988	$16.16	With Binding Screws..	1	1¼	27

Shallow Receptacles with Deep (⅝-Inch) Ring and 1 Lug

No. 59108

No. 4109 with Button Unscrewed

No. 4132

660 Watts, 250 Volts

59108	$16.16	With Binding Screws....	⅝	13/16	23
4109	25.00	Binding Screws Covered.	⅝	1 5/32	28

660 Watts, 600 Volts

4003	$22.00	With 6-Inch Wires.......	27/32	27/32	27

Shallow Receptacles with Deep (⅝-Inch) Ring and 5 Lug Slots

660 Watts, 250 Volts

59106	$16.16	With Binding Screws....	⅝	13/16	23

With Deep (⅝-Inch) Screw Ring and 1 Lug

No. 4133

No. 4133 with No. 433 Shade-Holder

No. 4135

With groove for Weatherproof Shade-Holders and recess for Emergency Shade-Holders.

660 Watts, 250 Volts

4133	$21.00	With Binding Screws....	⅝	13/16	20

660 Watts, 600 Volts

4135	$19.20	With 6-Inch Wires.......	27/32	27/32	27

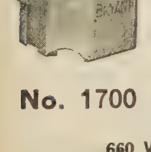
Porcelain Screw Rings for Above Receptacles

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3803	$6.06	Shallow, ½-Inch Ring...	25	100	12
3804	6.06	Deep ⅝-Inch Ring......	25	100	13
3805	10.10	Shade-Holder Ring......	25	100	10

No. 4063 Bryant Porcelain Receptacles

For Metal Signs, Border Lights and Cove Troughs

660 Watts, 600 Volts



With binding screw terminals, grooved back. Screw shell replaced with disconnecting wire. Hole required, 1⅜ in.; diameter, 1⅝ in.; depth, 1½ in.; screw spacing, 1 13/16 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4063	$14.74	10	100	23

No. 1700 Bryant Receptacles for Wooden Signs

660 Watts, 250 Volts (Not N.E.C. Standard)

Hole required, 1 9/16-inch diameter. Screw hole spaced 1⅞ inches.

Diameter of back, 1⅞ inches; thickness of back, 9/16 inch; length of neck, 1 1/32 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1700	$24.04	10	100	23

Hemco Sign Receptacles

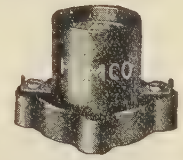
No. H100

No. H101

No. H114

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
H100	$10.52	With Binding Screws..........	25	250	23
H101	12.64	With Covered Back...........	25	250	25
H114	13.16	With 9-Inch Leads No. 14 Stranded Wire..............	25	250	25
H118	10.52	With 9-Inch Leads No. 18 Code Fixture Wire................	25	250	25
H119	11.52	No Leads.....................	25	250	20

Hemco Cleat and Pull Receptacles



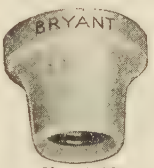
No. H715

No. H978

H715	$8.42	Templus Pony Cleat Receptacle	10	100	28
H975	21.06	Pull, with 6½-Inch Chain.....	10	100	40
H976	21.06	Pull, with 4-Foot Cord........	10	100	40
H977	23.16	Pull, with 6½-Inch Chain, Insulator.....................	10	100	40
H978	23.16	Pull, with 6½-Inch Chain, and 4-Foot Cord................	10	100	40

Bryant Porcelain Concealed Receptacles

660 Watts, 250 Volts



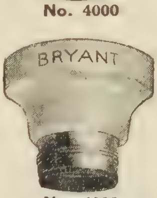
No. 4000

Outside diameter of base, 2⅜ inches. Height, 1 15/16 inches. Supporting screw spacing, 1⅝ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4000	$38.88	10	100	35

With Shade-Holder Groove

4001	$46.66	10	100	35



No. 4002

With Brass Shell for Uno and Other Standard Shade-Holders

Outside diameter of base, 2 5/16 inches. Height, 1⅞ inches. Supporting screw spacing, 1⅝ inches.

4002	$54.44	10	100	30

No. 50744

With Removable Porcelain Ring

Outside diameter of base, 2 11/32 inches. Height, 1⅞ inches. Supporting screw spacing, 1¼ inches.

50744	$46.66	10	100	35

No. 9407 Bryant Weatherproof Porcelain Receptacles

660 Watts, 600 Volts

Outside diam. of base, 2 11/16 in. Thickness of base, 1 in. Height, 2⅛ in. Holes for screws spaced 2 3/16 in.

Cat. No.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
9407	10	100	66	$35.36

Bryant Mogul Sockets

1500 Watts, 600 Volts

3/8-Inch Aluminum Caps / 1/2-Inch Aluminum Caps

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt.
SA	$30.30	10	50	4
SB	$30.30	10	50	4

Body with Binding Screws

Diameter, 2 3/32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt.
4123	$42.10	5	50	27

Body with Loop Terminals

Diameter, 2 3/32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt.
4088	$55.56	5	50	26

Body with 15-Inch Wire Leads

Diameter, 2 3/32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt.
4081	$70.70	5	50	36

Body with Side Connections

Main diameter, 2 1/4 in. Flange diameter, 2 1/2 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt.
4062	$55.56	5	50	31

Length of all bodies, 2 1/2 in. Screw spacing: Nos. 4123 and 4088 bodies, 1 13/32 in.; Nos. 4081 and 4062 bodies, 1 13/32 to 1 1/2 in.

Bryant Mogul Keyless Sockets

No. 4021

1500 Watts, 600 Volts

Brass Shell

Brass shell sockets have asbestos shell linings and paper cap linings.

Fitted with lanced screw shells to prevent loosening of the lamps due to vibration.

Diameter, 2 inches. Length, 3 3/4 inches.

Carton 5. Standard package, 50.

Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
4021	$212.10	3/8″ Cap........	30
4022	212.10	1/2″ Cap........	30

Bryant Double Filament Lamp Sockets

No. 4556

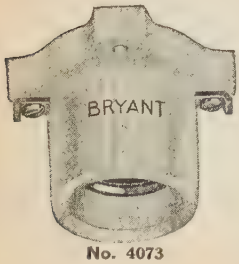
1500 Watts, 600 Volts

Main diameter, 2 1/4 inches. Length with cap or yoke, 3 7/16 inches. Length of body only, 2 9/16 inches. Body mounting screw centers, 1 7/16 inches.

Carton, 5. Standard package, 50.

4556	$105.00	3/8″ Brass Cap	36
4557	95.00	3/8″ Yoke.....	29
4558	85.00	Body Only...	21

Bryant Porcelain Mogul Cleat Receptacles



No. 4073

1500 Watts, 250 Volts

Diameter over lugs, 3 1/2 inches. Diameter of neck, 2 1/4 inches. Height, 2 9/16 inches. Diameter of main part of base, 2 5/8 inches. Supporting screw spacings, 2 7/8 inches.

Carton, 5. Standard package, 50.

4073	$75.76	....	40

Bryant Porcelain Rosettes

Junior 2-Piece with Cleat Base

No. 1501

Main diameter, 2 9/32 inches; over lugs, 2 31/32 inches. Height, 1 11/16 inches. Screw spacing, 1 5/8 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
With Fusible Cap, 2 Amperes, 125 Volts				
1501	$26.32	10	100	37
With Fuseless Cap, 660 Watts, 250 Volts				
297	$13.68	10	100	40

Junior 2-Piece with Concealed Base

No. 1502

Outside diameter of base, 2 11/32 inches. Height, 2 1/8 inches. Supporting screw spacing, 1 5/8 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
With Fusible Cap, 2 Amperes, 125 Volts				
1502	$26.32	10	100	47
With Fuseless Cap, 660 Watts, 250 Volts				
298	$13.68	10	100	51

Junior 1-Piece with Cleat and Concealed Base Combined

No. 1999

Main diameter, 2 7/32 inches; over lugs, 2 27/32 inches. Height, 1 3/8 inches. Screw spacing, 1 1/4 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
With Fuseless Cap, 660 Watts, 250 Volts				
1999	$9.48	10	100	22

1-Piece Fuseless for Outlet Boxes

660 Watts, 250 Volts

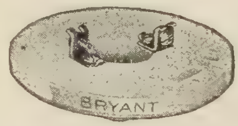
For 3 1/4-Inch Box

No. 572

Outside diameter, 3 1/2 inches. Height, 1 inch. Screw spacing, 2 3/4 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Plain				
572	$10.52	10	50	25
With Binding Screw Terminals				
574	$33.26	10	50	26

For 3 1/4 and 4-Inch Box



No. 574

Outside diameter, 4 21/32 inches. Height, 1 inch. Screw spacing, 3 1/2 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Plain				
573	$14.74	5	50	46
With Binding Screw Terminals				
575	$45.48	5	50	47

Bryant Socket Reducers

No. 391

No. 392

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
421	$35.36	Mogul to Medium.	10	100	19
392	12.00	Medium to Candelabra..........	25	100	6
391	8.48	Candelabra to Miniature......	100	100	1

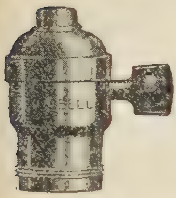
GraybaR QUALITY SINCE 1869
Distributed and guaranteed by
GraybaR ELECTRIC COMPANY

Hubbell Pull Sockets

250 Watts, 250 Volts

Sockets have interchangeable shells and caps. Regularly equipped with 6½-inch chains.

Cat. No.	Per 100	Cap In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3618	$33.68	⅛	25	250	54
3620	33.68	Pend.	25	250	54



Hubbell Key Sockets

250 Watts, 250 Volts

Sockets have interchangeable shells and caps. Standard length of key, one inch.

Cat. No.	Per 100	Cap In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3664	$27.36	⅛	25	250	55
3665	29.96	⅜	25	250	51
3666	27.36	Pend.	25	250	53

Hubbell Keyless Sockets

660 Watts, 250 Volts

Cat. No.	Per 100	Cap In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3667	$25.26	⅛	25	250	50
3668	27.86	⅜	25	250	50
3669	25.26	Pend.	25	250	45

Hubbell Standard Bodies

Socket Bodies

No. 60

Pull

Regularly equipped with 6½-inch chains.

250 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
60	$25.26	25	250	42

660 Watts, 250 Volts

178	$29.46	25	250	47

No. 61

Key

Standard length of key, 1 inch.

250 Watts, 250 Volts

61	$18.94	25	250	45

660 Watts, 250 Volts

75	$52.12	25	250	46

No. 62

Keyless

660 Watts, 250 Volts

62	$16.84	25	250	36

Pull Switch Bodies

3 Amperes, 125 Volts

1 Ampere, 250 Volts

Regularly equipped with short chain and 4-foot black cords.

Fixture

63	$78.70	10	20	3

Rosette

65	$82.64	10	20	4

Hubbell Standard Socket Caps

No. 14

Pendent

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
14	$8.42	25	250	9

No. 55

Porcelain Strain Relief Bushing

55	$14.84	25	100	5

No. 362

Pendent Socket Caps With Cord Grip

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
362	$22.28	⅜″ to ½″ Cord	25	100	12
363	22.28	¼″ to ⅜″ Cord	25	100	16

⅛-Inch Female

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
11	$8.42	25	250	13

No. 11

¼-Inch Female

12	$26.14	5	25	2

⅜-Inch Female

13	$11.02	25	100	6

No. 15

⅛-Inch Male

15	$16.34	5	25	2

⅜-Inch Male

17	$26.14	25	50	4

No. 18

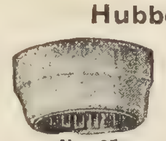
⅛-Inch Angle

18	$34.30	25	50	5

⅜-Inch Angle

20	$39.18	5	25	2

Hubbell Standard Socket Bases



No. 25

Small Concealed—Solid

Supporting screw holes are spaced 1⅛ inches on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
25	$26.72	10	100	20

No. 57

Small Concealed—Slotted

Supporting screw holes are spaced 1⅛ inches on centers.

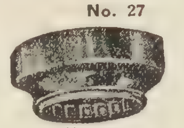
57	$26.72	10	100	20

No. 27

Surface Wiring

Supporting screw holes are spaced 2⅛ inches on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
27	$34.16	10	100	30



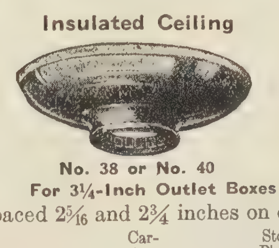
No. 26

Small Covered Concealed

Screw holes spaced 1¾ inches on centers.

26	$41.58	10	100	20

Insulated Ceiling



No. 38 or No. 40

For 3¼-Inch Outlet Boxes

Screw holes spaced 2$\frac{5}{16}$ and 2¾ inches on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
38	$54.94	10	50	26

For 4-Inch Outlet Boxes

Screw holes spaced 2$\frac{5}{16}$, 2¾ and 3½ inches on centers.

40	$99.48	5	50	50

Hubbell Brass Shell Threaded-Catch Sockets

Nos. 1639 and 1636

No. 1637

No. 1638

Threaded ring is included as part of socket body. Standard finish is brush brass.

A heavy threaded ring holds the cap and shell together securely and will not pull apart from strain or vibration. This ring holds with a strong grip and will sustain the weight of the heaviest reflector.

No. 1630

No. 1632

No. 1634

No. 2502

Socket Bodies

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
250 Watts—250 Volts					
1637	$28.28	Key Body	25	250	44
1639	40.40	Pull Body	25	250	41
660 Watts—250 Volts					
1636	$86.26	Pull Body	25	250	42
1638	25.26	Keyless Body	25	250	35
Socket Caps					
1630	$8.08	⅛-inch Cap	25	250	17
1631	19.80	¼-inch Cap	25	50	8
1632	14.14	⅜-inch Cap	25	100	12
1633	24.04	½-inch Cap	25	50	8
1634	8.08	Pendent Cap	25	250	13
1635	11.32	Strain Relief Pendent Cap	25	100	12
For ⅜-Inch Pipe					
2236	$53.74	Pendent Chain Link Fixture Cap	10	100	18
For .375 and .500-Inch Cord					
2502	$18.38	Pendent Cap, Cord Grip	25	100	7

Hubbell Bakelite Threaded-Catch Sockets

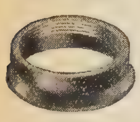
No. 3988

No. 3984

No. 3986

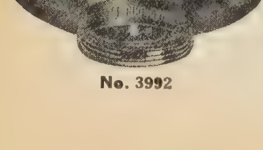
No. 3980

No. 3983


No. 3979

Socket Bodies

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
250 Watts—250 Volts					
3984	$28.28	Key Body	10	100	19
3988	40.40	Pull Body	10	100	19
3990	51.72	Pull with Ins. Chain	10	100	18
660 Watts—250 Volts					
3986	$25.26	Keyless Body	10	100	18
3987	28.28	Push Body	10	100	17
Socket Caps					
3980	$8.08	⅛″ Cap	10	100	5
3981	14.14	⅜″ Cap	10	100	6
3982	8.08	Pendent Cap.	10	100	6
3983	18.38	Pendent Cap with Cord Grip	10	100	4
Bakelite Finishing Ring					
3979	$10.10	Ring	10	100	3
Brown Porcelain Socket Bases					
3992	$33.94	3¼″ Box Base	10	50	36
3993	45.24	4″ Box Base	5	50	40


No. 3992

A threaded ring is included as part of Socket Bodies and Bases.

Brown Bakelite is standard. Parts of Bakelite and Brass Shell Threaded Catch Sockets do not interchange.

Hubbell Socket Parts

Medium Base

Brush brass is standard finish on all exposed metal parts and will be furnished unless otherwise specified. Carton quantity is considered one-fifth standard package.

Description	Per 100	Std. Pkg.
Shells, All Kinds, without Linings	$10.00	250
Cap, ⅛-Inch without Lining	9.50	250
Cap, ¼-Inch without Lining	15.50	250
Cap, ⅜-Inch without Lining	15.50	250
Cap, Pendent, without Bushing or Lining	8.50	250
Linings, Shell, All Kinds	.70	250
Linings, Cap, All Sizes	.50	250
Bushings, Pendent Cap, Composition	1.00	250
Interior, Keyless, (Medium Base M-300)	14.34	250
Interior, Keyless, Short Shell (M-103)	12.24	250
Interior, Push, with Non-Removable Buttons (M-412)	18.56	250
Interior, Key, 250 Watts (M-200)	16.44	250
Interior, Key, 660 Watts (M-202)	49.62	250
Interior, Pull, 250 Watts, with Chain Eyelet, but without Chain or Tassel (MA-100)	19.16	250
Interior, Pull, 250 Watts, without Chain, Tassel and Chain Eyelet (MB-100)	18.76	250
Interior, Pull, 250 Watts, with Chain, Tassel and Chain Eyelet (M-100)	22.76	250
Interior, Pull, 250 Watts, without Chain Eyelet, but with Chain and Pendent	22.36	250
Interior, Pull, 660 Watts, with Chain Eyelet, Chain and Tassel (M-109)	26.96	250
Standard Chain Eyelet for Pull Sockets (D-7500)	5.00	250
Electrolier Chain Eyelet for Pull Sockets (D-7501)	5.00	250
7-Inch Chain with Tassel	13.00	250
Tassel for Pull Chain	6.00	250
Screw Shells, All Kinds	3.50	250

Acorn Brass Shell Fixture Sockets

No. 2618

Devices not sold in less than standard package quantities; nor cap or body sold separately. Thread and bead shells are standard, but shells with thread only can be supplied on special order.

No. 2664

Standard Size

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Pull—250 Watts—250 Volts					
2618	$23.16	With ⅛-inch Cap	25	250	52
2620	23.16	With Pendent Cap	25	250	48
2619	22.16	With Flat Cap	25	250	48
Turn Knob—250 Watts—250 Volts					
2625	$17.90	With ⅛-inch Cap	25	250	53
2626	17.90	With Pendent Cap	25	250	46
2627	16.90	With Flat Cap	25	250	46
Key—250 Watts—250 Volts					
2664	$17.90	With ⅛-inch Cap	25	250	53
2666	17.90	With Pendent Cap	25	250	46
2629	16.90	With Flat Cap	25	250	46
Keyless 660 Watts—250 Volts					
2667	$15.78	With ⅛-inch Cap	25	250	46
2669	15.78	With Pendent Cap	25	250	42
2639	14.78	With Flat Cap	25	250	42
Electrolier Size					
Push Thru—250 Watts—250 Volts					
2950	$18.94	With ⅛-inch Cap	25	250	52
2920	18.94	With Pendent Cap	25	250	48
2919	17.94	With Flat Cap	25	250	48
2999	20.94	With Side Outlet Cap	25	250	48
Keyless Short Shell—660 Watts—250 Volts					
2899	$13.68	With ⅛-inch Cap	25	250	46
2820	13.68	With Pendent Cap	25	250	42
2819	12.68	With Flat Cap	25	250	42

Hubbell Candelabra Sockets

No. 5742

No. 5792

75 Watts, 125 Volts

With ⅛-inch caps.
Standard finish is brush brass.

Candelabra Base

Cat. No.	Per 100	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Pull, Quick Catch Shell Fastening				
5742	$77.78	10	50	6
Keyless, Screw Thread Shell Fastening				
5753	$41.10	25	100	10
Bayonet Base				
Pull, 2-Screw Lock Shell Fastening				
5792	$127.26	10	50	7

Pull sockets furnished with chain over 4 inches in length, add to price $10.00 per 100 feet. For pull sockets equipped with ⅜-inch extension eyelets, add to price $10.00 per 100. Separate extension eyelets, $15.00 per 100.

Special finishes take same additional prices as standard sockets.

Hubbell Adjustable Candle Sockets

No. 3965

No. 3969

Cat. No.	Per 100	Length, In. Min.	Length, In. Max.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Pull—Complete						
250 Watts, 250 Volts						
3965	$28.42	3¾	4⅝	10	100	30
3966	28.42	4¾	5⅝	10	100	31
3967	28.42	5¾	6⅝	10	100	32
Keyless—Complete						
660 Watts, 250 Volts						
3969	$8.42	3¾	4⅝	25	250	36
3970	8.42	4¾	5⅝	25	250	38
3971	8.42	5¾	6⅝	10	100	21

Hubbell Porcelain Keyless Candle Sockets

660 Watts, 250 Volts

No. 3394

No. 3921

Cat. No.	Per 100	Bushing Inches	Length Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
With Hickey						
3394	$7.36	⅛	2$\frac{13}{16}$	25	250	30
Without Hickey						
3921	$7.36	⅛	2$\frac{1}{16}$	25	250	30

Hubbell Keyless Pony Wall Sockets

660 Watts, 250 Volts

Supporting screw holes are spaced 1$\frac{3}{16}$ inches on centers.
Standard finish is brush brass.

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
50717	$37.12	Solid Base	10	100	24
50718	37.12	Slotted Base	10	100	24

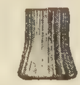
GraybaR QUALITY SINCE 1869
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

Hubbell Socket Accessories

Socket Chain, Cord, Acorns and Tassels

No. 5382

No. 3946


No. 5919

No. 7015

No. 3436

Standard finish is brush brass. For special finishes on chain add $2.00 per 100 feet or fraction.

Pull chains less than 6½ inches in length with tassels attached take the same price as regular 6½-inch chain, or $13.00 per 100.

Pull sockets furnished with short chain and 4 feet of cord, complete with tassel instead of 6½-inch chain, add $2.00 per 100.

Separate chain cut to length with tassel, or chain sold as part of a device, takes a price of $10.00 per 100 feet or fraction thereof.

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5382	*$7.08	No. 6 Standard Socket Chain	*200	*1000	15
5535	*7.08	No. 3 Candelabra Chain.	*100	* 500	20
6563	*1.42	Black Linen Cord	*200	*1000	10
3436	19.80	6-Foot Cord with Short Chain and Tassel for No. 60 Body	50	250	10
3321	29.70	6½-Inch Pull Chain Complete with Fiber Insulator and Tassel for No. 60 Body	50	250	10
3946	8.48	Tassel, Standard Detachable	50	250	5
3947	8.48	Tassel, Candelabra Detachable	10	50	1
‡6561	16.96	6-Foot Cord Only with Tassel	50	250	10
‡6562	22.62	10-Foot Cord Only with Tassel	50	250	15
**5919	8.48	Tassel, Adjustable for Linen Cord	50	250	5
7015	25.26	Acorn, Detachable Luminous	25	50	†9

*Feet, and price per 100 feet.

**Furnished in black finish to match cord.

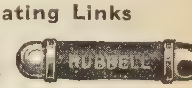
†Ounces.

‡Can be supplied with white cord at no extra price.

Detachable Nuclasp Insulating Links

No. 7026

No. 6999


No. 6814

Easy to attach and detach. Neat in appearance.

Standard finish is brush brass. All other finishes on insulators and connectors, add $2.00 per 100 to price.

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Oz. Std. Pkg.
6999	$12.72	Detachable Insulator	20	100	16
7026	4.24	Detachable Chain Connector	100	200	8
*6814	11.32	Detachable Insulating Link	20	100	8
1650	3.54	Splicing Link for No. 3 Chain.	40	200	8
1651	3.54	Splicing Link for No. 6 Chain	40	200	8
1652	8.48	Porcelain Pendant	50	100	2

*This device is fitted with slotted catches for chain.

Hubbell Standard Porcelain Sockets

Standard finish of exposed brass parts is wash nickel. For special plated finishes on exposed brass parts except on cap, add $2.00 per 100. Standard length of porcelain keys is ⅞ inch. Standard length of chain, 6½ inches. Sockets with chains over 6½ inches in length, add to price $10.00 per 100 feet or fraction thereof. Machine screws for mounting furnished with socket bases. All porcelain sockets are wired from the cap.

No. 160

No. 161

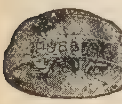
No. 162

Socket Bodies

Pull Bodies

250 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
160	$66.74	10	100	32
660 Watts, 250 Volts				
1606	$114.54	10	100	30
Key Bodies				
250 Watts, 250 Volts				
161	$29.42	10	100	27
660 Watts, 250 Volts				
1616	$41.00	10	100	60
Keyless Bodies				
660 Watts, 250 Volts				
162	$26.02	10	100	17


No. 150

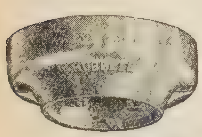
No. 151

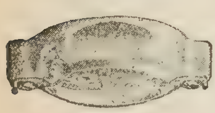
No. 175

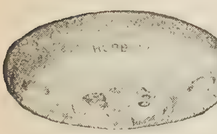
Socket Caps

Pendant

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
150	$11.32	10	100	11
⅛-Inch Brass				
151	$22.62	10	100	12
⅜-Inch Brass				
153	$27.14	10	100	16
½-Inch Brass				
191	$38.18	10	100	20
⅜-Inch Angle Brass				
175	$85.00	10	100	26


No. 156


No. 157


Nos. 158 or 159

Socket Bases

Concealed Type

Supporting screw holes are spaced 1⅛ and 2$\frac{5}{16}$ inches on centers. Outside diameter, 2¾ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
156	$21.22	10	100	40

Cleat Type

Supporting screw holes are spaced 1$\frac{15}{16}$ inches on centers. Outside dimensions, 2⅞x2$\frac{5}{16}$ inches.

157	$19.80	10	100	21

Ceiling Bases for Outlet Boxes

For 3¼-Inch Boxes

Supporting screw holes spaced 2¾ inches on centers. Outside diameter, 3$\frac{11}{16}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
158	$33.94	10	50	26

For 4-Inch Boxes

Screw holes spaced 3½ inches on centers. Outside diameter, 4$\frac{7}{16}$ inches.

159	$45.24	5	50	36

Hubbell Aluminum Shell Weatherproof Keyless Sockets

660 Watts, 600 Volts

No. 3121

No. 3122

No. 3138

The two piece type sockets have binding screws in the caps, the cap porcelain being permanently fastened in the cap. Two piece sockets are wired and assembled from the front and have threaded shells to take the weather-proof non-ventilated shade-holders.

Both types are furnished with screw shells having lamp grips.

Two Piece Type

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3120	$70.70	With ⅜″ Cap..	10	50	22
3121	70.70	With ½″ Cap..	10	50	22
Shade Holders					
3122	$28.28	2¼ Inch.......	10	50	6
3123	42.42	3¼ Inch.......	10	50	7
3133	72.00	4 Inch.........	10	50	10
One Piece Type					
3138	$56.56	With ⅜″ Nipple	10	50	20
3139	56.56	With ½″ Nipple	10	50	20

Hubbell Porcelain Pull Receptacles

250 Watts, 250 Volts

No. 998

No. 999

Standard gasket is of special packing compound to withstand heat. Asbestos gasket supplied without additional cost. Hole required, 1½ inches.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
998	$23.16	Short Chain and 4 Ft. Cord.....	10	100	40
999	35.36	3-Ft. Chain.	10	100	40

Standard finishes are brush brass and nickel plate. Brush brass furnished unless otherwise specified. For other finishes on No. 998, add $2.00 per 100; No. 999, add $10.00 per 100.

For chain longer than 6½ inches, add $10.00 per 100 feet or fraction thereof. Extra length cord, $1.00 per 100 feet. For insulators, add $8.00 per 100.

D12244 Extra Chain Eyelet

Receptacle can be furnished on request with an extra chain eyelet which can be riveted or spun on shell of ceiling fixture or outlet box cover without extra cost. When sold separately, price of extra chain eyelet is $4.00 per 100. These devices can be furnished on special order with 6-inch leads of No. 14 B. & S. stranded rubber covered wire at $8.00 additional price per 100.

No. 9402 Hubbell Porcelain Cleat Receptacles

Cleat Binding Screws

660 Watts, 250 Volts

Holes for supporting screws are spaced 2⅜ inches on centers.

Outside dimensions of base, 2$\frac{15}{16}$x2$\frac{23}{32}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9402	$26.44	10	100	40

No. 4013 Hubbell Porcelain Cleat Receptacles

660 Watts, 250 Volts

With Shade Holder Groove

Holes for supporting screws are spaced 2⅜ inches on centers.

Dimensions of base, 2$\frac{15}{16}$x2$\frac{23}{32}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4013	$34.22	10	100	38

Hubbell Brass Covered Surface and Outlet Box Ceiling Receptacles

Keyless

660 Watts, 250 Volts

No. 4100

No. 4100 is for 3¼ and 4-inch outlet boxes. Screw spacings, 2¾ and 3½ inches.

No. 4102 is for use on 3¼-inch boxes. Screw spacings, 2¾ inches.

Standard finish is brush brass.

Cat. No.	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
4100	Keyless	10	50	47	$84.84
4102	Keyless	10	50	30	70.00

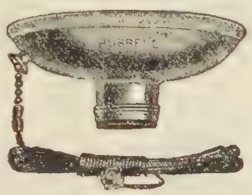
Pull

250 Watts, 250 Volts

No. 4104 is for 3¼ and 4-inch outlet boxes. Screw spacings, 2¾ and 3½ inches.

It is equipped with short chain, 10 feet of black linen cord and small composition ball.

Standard finish is brush brass.



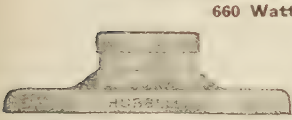
Cat. No.	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
4104	Pull	10	50	60	$183.82

Hubbell Porcelain Receptacles

Ceiling Receptacles

For 3¼ and 4-Inch Outlet Boxes

660 Watts, 250 Volts



No. 3922

Holes for supporting screws in No. 3922 are spaced 2¾ inches on centers; in No. 3923 spaced 3½ inches on centers.

Cat. No.	Per 100	Size In.	Receptacle, Inches Height	Receptacle, Inches Outside Diameter	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3922	$16.84	3¼	1⅜	3$^{11}/_{16}$	5	100	80
3923	21.06	4	1⅜	4$^{7}/_{16}$	5	50	42

No. 829

Pull Receptacles

With Flush Back

Pull—250 Watts, 250 Volts

Keyless—660 Watts, 250 Volts

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
829	$141.40	Pull, Short Chain and Cord....	10	24	31
830	141.40	Pull, Short Insulated Chain...	10	24	32
855	141.40	Pull, Close-Up Porcelain Pendant..................	10	24	30
860	78.78	Keyless........................	10	24	30

Hubbell Weatherproof Outlet Box Receptacles

With Removable Metal Cover With Screw Terminals

660 Watts, 250 Volts

No. 456

Cadmium finish steel covers. Height, 1$^{3}/_{16}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
For 3¼-Inch Outlet Boxes				
456	$15.78	10	100	53
For 4-Inch Outlet Boxes				
457	$17.90	5	100	72

Hubbell Porcelain Pull and Keyless Receptacles

With Removable Rings for 3¼ and 4-Inch Boxes With Flush Back

250 Watts, 250 Volts

No. 4010

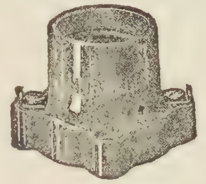
The 3¼ inch size: Diameter of base, 3$^{11}/_{16}$ inches; height over all, 2¼ inches. Holes for supporting screws are spaced 2¾ inches on center.

The 4-inch size: Diameter of base, 4¾ inches; height over all, 2¼ inches. Holes for supporting screws are spaced 3½ inches on center.

Carton, 10. Standard package, 50.

Cat. No.	Per 100	Description	Box In.	Wt., Lbs. Std. Pkg.
With Fluted Porcelain Rings				
4010	$31.58	With 7-inch Chain and Insulator	3¼	41
4040	42.00	With 7-inch Chain and Insulator	4	60
40101	27.36	With 7-inch Chain Only........	3¼	41
40401	38.00	With 7-inch Chain Only.......	4	60
40102	31.58	With Short Chain, Long Cord..	3¼	41
40402	42.00	With Short Chain, Long Cord.	4	60
With Grooved Shade Holder Rings				
4026	$31.58	With 7-inch Chain and Insulator	3¼	41
4046	42.00	With 7-inch Chain and Insulator	4	60
40261	27.36	With 7-inch Chain Only........	3¼	41
40461	38.00	With 7-inch Chain Only.......	4	60
40262	31.58	With Short Chain, Long Cord.	3¼	41
40462	42.00	With Short Chain, Long Cord..	4	60

No. 50715 Hubbell Porcelain Pony Cleat Receptacles



Binding Screws

660 Watts, 250 Volts

Holes for supporting screws spaced 1$^{15}/_{16}$ inches on centers. Dimensions of base, 2½x2⅜ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
50715	$8.42	10	100	25

Hubbell Porcelain Sign Receptacles

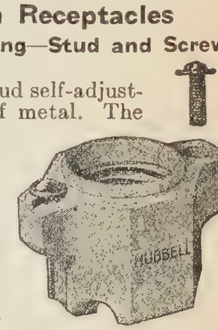
These receptacles require a hole 1⅜ inches in diameter. Holes for supporting screws are spaced 1$^{13}/_{16}$ inches on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Binding Screws				
4063	$14.74	10	100	22
Loop Terminals				
4064	$14.74	10	100	22

Hubbell Porcelain Sign Receptacles

With Bronze Washer—Head Spring—Stud and Screw

A coil spring makes the holding stud self-adjusting for use on varying thickness of metal. The receptacle is snapped into place by means of the stud, then the holding screw is run in from the front.



A 1⅜-inch punch is required.

Holes for supporting screws are spaced 1$^{13}/_{16}$ inches on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Binding Screws				
4067	$14.74	25	250	60
Loop Terminals				
4068	$14.74	25	250	60

Acorn Porcelain Screw Ring Sign Receptacles

Unglazed—660 Watts, 250 Volts

No. 4112

No. 4114—No. 4118

No. 4113

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4112	$10.52	Exposed Terminals	25	250	51
4113	12.64	Enclosed Terminals	25	250	64
4114	13.16	With 9-inch Leads of No. 14 R. C. Wire	25	250	73
4118	10.52	With 9-inch Leads of No. 18 R. C. Wire	25	250	71

Hubbell Porcelain Sign Receptacles

No. 4003

660 Watts, 250 Volts

Deep—With 9/16-Inch Ring and 6-Inch No. 14 Wires

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4003	$22.00	10	100	28

Shallow—With 3/8-Inch Ring and 6-Inch No. 14 Wires

4035	$22.00	10	100	28

No. 4109

With 9/16-Inch Ring

Covered Terminals

With porcelain button which covers the line terminal screw. Porcelain piece is attached in place by one center screw.

4109	$25.00	10	100	27

No. 59108

Shallow—With 9/16-Inch Ring

Binding Screws

59108	$16.16	10	100	22

Loop Terminals

59109	$16.16	10	100	22

No. 61988

Deep—With 3/8-Inch Ring

Binding Screws

61988	$16.16	10	100	21

Hubbell Porcelain Sign Receptacles

Special Features and Separate Rings

660 Watts, 250 Volts

All receptacles without leads have 8 notches and are easy to install. A notch in the side of hole punched in metal sign, engages one of the slots in porcelain preventing turning. No. 1197 pliers are used for forming these notches or lugs.

Separate fluted glazed porcelain rings, $6.00 per 100. Standard package, 100. Separate grooved glazed porcelain rings, $10.00 per 100. Standard package, 100.

Catalogue numbers 4003 and 4035 can be furnished with longer wire leads, on special order, at $4.50 additional per 100 feet per conductor.

Sign receptacles with removable rings require a hole 1½ inches in diameter.

Receptacles can be supplied with anti-paint discs assembled, when so ordered without extra charge. Discs sold separately at 20 cents per 100.

Hubbell Weatherproof Sockets

No. 60666

Composition

660 Watts, 600 Volts

Each socket is furnished with 6 inches of No. 14 B. & S. stranded rubber-covered wire.

With Shade Holder Groove

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
60666	$19.00	10	100	25

Without Shade Holder Groove

43310	$18.00	10	100	25

No. 43320

Mica Compound

With Moulded in Leads and Shade Holder Groove

660 Watts 600 Volts

Furnished with 6 inches of moulded in No. 14 B. & S. stranded rubber-covered wire.

43320	$18.00	10	100	25

No. 60666-B

Bakelite

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
60666-B	$19.00	With Groove	10	100	25
43310-B	18.00	Without Groove	10	100	25

Longer wire supplied on large orders only. Extra charge $4.50 per 100 feet for each conductor.

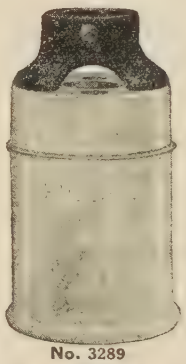
No. 310

Acorn—Bakelite

Pony Size

660 Watts, 600 Volts

310	$12.00	With 6″ Leads	10	100	22



No. 3289

Hubbell Porcelain Mogul Sockets

1500 Watts, 600 Volts

Keyless

With Aluminum Cap

Cat. No.	Per 100	Size Cap Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3390	$101.00	3/8	2	50	75
3391	101.00	1/2	2	50	75

With Cast Iron Yoke

3289	$85.86	3/8	2	50	85
3290	85.86	1/2	2	50	85

No. 3468

Keyless, One-Piece Porcelain

With Aluminum Cap

3468	$85.86	3/8	2	50	36
3469	85.86	1/2	2	50	36

With Cast Iron Yoke

3471	$70.70	3/8	2	50	60
3472	70.70	1/2	2	50	60

No. 3464

Cleat Receptacles

Screws spaced 2⅞ inches.

Diameter of base, 3½ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3464	$75.76	2	50	45

P & S-Despard Switches and Receptaoles

The P & S-Despard units listed below, when combined or interchanged with one another, enable the contractor to assemble over 59244 different wiring device combinations.

P & S-Despard units are easily assembled in the mounting straps. A small screwdriver is all that is needed to lock each device securely in place. The correct style of mounting strap is furnished with each plate.

P & S-Despard Switches are fully capable of controlling Type C lamp loads. The mechanism contains only 4 moving parts, including a laminated insulating disc which acts as an arc snuffer.

Receptacles or convenience outlets contain contacts of entirely new design. Contacts grip both sides of plug cap fingers and are formed so that the spring action is at bottom of the receptacle. This insures constant spring tension and prevents loose plug caps.

Flush Tumbler Switches

Made of brown bakelite including lever which is doubly insulated. Strap is insulated from switch. Front and back are enclosed, making a thoroughly dust-proof unit.

Any P & S-Despard tumbler flush switch can be quickly and easily converted into a lock switch by use of lock switch hood No. 1315.

Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1311	$32.00	*S.P.	10	5	10	100	11
1312	84.00	†D.P.	..	10	10	10	2½
1313	50.00	†3-Way	10	5	10	50	8
1314	280.00	†4-Way	5	2	10	10	2½

Lock Switch Hoods and Keys

Fits over switch lever and is fastened to wall plate by 2 small holding screws fitting into knockouts provided in all bakelite plates. Special notched screws for fastening plates to box are also provided to prevent unauthorized removal -cannot be removed without use of a special key Cat. No. 1316. This same key also used in operating switch installed with lock switch hood.

Brown Cat No.	Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.	Alabar Cat. No.	Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
1315	$45.00	10	20	3	1415	$56.00	10	10	2

Key Only

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1316	$20.00	1	1	1/16

Standard Tumbler Lock Switches

Made of brown bakelite including the lever which is doubly insulated. Strap is insulated from the switch. Front and back are enclosed, making a thoroughly dust-proof unit.

One Cat. No. 1499 Key furnished with each lock switch.

Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1311-L	$95.00	*S.P.	10	5	10	100	11
1312-L	147.00	†D.P.	..	10	10	10	2½
1313-L	113.00	†3-Way	10	5	10	50	8
1314-L	343.00	†4-Way	5	2	10	10	2½

Key Only

For No. 1311-L Type Lock Switch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1499	$20.00	1	1	1/16

Replacement Switches

Capable of controlling Type C lamp circuits. Made small to make wiring room larger. ·All bakelite enclosed dust-proof housing.

One No. 1499 Key furnished with each switch.

Supporting screw spacing, 3 9/32 inches.

Length of body, 1½ inches; width, ⅞ inch; depth, 1⅛ inches.

Standard Cat. No.	Per 100	Lock Type Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1815-D	$32.00	1815-DL	$95.00	S.P., Ind.	10	5	10	100	20
1825-D	84.00	1825-DL	147.00	D.P., Ind.	..	10	10	50	13
1835-D	50.00	1835-DL	113.00	3-Way....	10	5	10	50	13
1844-D	280.00	1844-DL	343.00	4-Way....	5	2	10	10	4

*Length, 1½ inches; width, ⅞ inch; depth, 1 3/32 inches.
†Length, 1⅝ inches; width, ⅞ inch; depth, 1 3/32 inches.

Convenience Outlets

15 Amp., 125 Volts; 10 Amp., 250 Volts

For use with switch radio outlet or any other P & S-Despard device.

Single parallel slots.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1320	$15.00	10	100	7
For Pilot Light				
1341	$25.00	10	30	4

Insulating Adapters

Supplied with No. 1671-R Brass Plate, but can be furnished separately. Designed to fit over the neck of outlet Nos. 1320 and 1341 and into round opening in brass plate.

1327	$10.00	10	50	4

Triplex Convenience Outlets

15 Amp., 125 Volts; 10 Amp., 250 Volts
With Constant Tension Contact

Three convenience outlets in place of the usual two. Has easy finding slots, constant tension contacts which grip both sides of plug cap blades, 4 binding screws for feed-thru circuits and one-piece brown bakelite body. Furnished complete with wall plate.

1325	$39.00	10	100	25

Attachment Plug Caps

Self-Locating

Either regular or polarized with fingergrip feature and parallel blades. Finger grip feature enables thumb and finger to get a good grip to pull cap from receptacle or insert it. Due to their rectangular shape they are self-locating. Has 9/32-inch cord hole.

Brown Cat. No.	Per 100	Carton	Std. Pkg.	Wt Lbs. Std. Pkg.	Alabar Cat. No.	Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
1321	$5.50	10	100	7	1421	$11.00	10	100	4
*1326	5.50	10	100	7	*1426	11.00	10	100	4

*Polarized.

Radio Outlets

Can be installed in any outlet box singly, in multiples or with P & S-Despard devices.

For antenna and ground connections.

Brown

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1322	$38.50	10	50	4
Complete with Box Divider and Cap				
1324	$77.00	10	30	8

Radio Caps

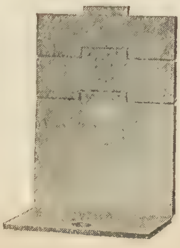
Cap blades set at an angle which prevents insertion in power slots.

For antenna and ground connections.

Has 9/32-inch cord hole.

Brown				
1323	$12.50	10	50	4
Alabar				
1423	$17.50	10	50	4

Box Dividers



Keeps antenna and ground wires separate from any circuit entering same box.

For 1½, 2 or 2½-inch switchboxes.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1346	$26.00	10	10	3

The P & S-Despard Line

Pilot Light Receptacles

75 Watts, 125 Volts

A signal device which acts as a warning to indicate when circuit is open or closed.

A 6-watt, 120-volt red mazda lamp and hood are furnished with each receptacle.

Cat. No.	Per 100	Style Hood	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
1340	$95.50	Chromium-Plated.	10	30	5
1340-B	95.50	Brush Brass......	10	30	5

Night Light Receptacles

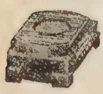
75 Watts, 125 Volts

For use in bedrooms, hallways, nurseries, hospitals, over bell push at entrances, etc.

Gives sufficient light to outline walls or furniture. A 6-watt, 120-volt clear mazda lamp is used. Lamp and reflector furnished with each receptacle.

1339	$95.50	Chromium-Plated.	10	30	5
1339-B	95.50	Brush Brass......	10	30	5

Blank Inserts or Cord Holes

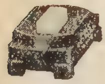


Can be placed in any one of the openings of a P & S-Despard Plate. Also used to fill unused openings in plates. Made with knockout which can be punched through for use as a cord hole or telephone outlet.

Brown Cat. No.	Brown Per 100	Alabar Cat. No.	Alabar Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
1345	$9.50	1445	$20.50	10	10	1

Bell Pushes

For 6 to 12-Volt Circuits



Can be placed in same box with P & S-Despard switch, outlet or night light. Made of bakelite.

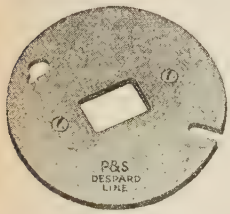
1344	$23.50	1444	$37.50	10	10	1

Name Plates

Consists of a rust-proof frame, a transparent window and white card.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1330	$15.50	Stainless Steel.	10	30	¼
1330-1	15.50	Brush Brass...	10	30	¼

Metal Box Covers



For mounting any one P & S-Despard device directly on a 3¼-inch outlet box, or any one or two P & S-Despard devices on a 4-inch outlet box.

Especially adapted for surface or exposed work. Cadmium-plated.

		For 3¼-Inch Box			
1361	$12.50	Single Opening.	10	100	25
		For 4-Inch Box			
1362	$15.50	Single Opening.	10	100	33
1363	20.00	Two-Opening..	10	50	18

Mounting Straps

For P & S and P & S-Despard Brass and Bakelite Plates

The correct style of mounting strap is packed with each P & S-Despard brass or bakelite plate, but can be ordered separately.

Single Opening Mounting Strap

Length, 4$\frac{3}{32}$ in.; width, 1$\frac{5}{16}$ in. Screw hole spacing, 3$\frac{13}{32}$ in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1347	$4.00	10	50	5

Three Opening Mounting Strap

Length, 4$\frac{3}{32}$ inches; width, 1$\frac{15}{32}$ in. Screw hole spacing, 3$\frac{13}{32}$ in.

1348	$4.00	10	50	5

Appliance Strap

Fastening holes tapped for 6-32 screws.

1354	$3.50	10	100	3

P & S-Despard Plates

Two-Purpose, Plain Mat Finish Bakelite Wall Plates

Especially adapted for the application of paint or lacquer. For use when plates are specified to match either the wall surface, hardware or wood trim. The polished bevel should be lightly sandpapered, then either linseed or pyroxlyn base paints can be applied. Plates are not furnished with a painted surface.

1-Gang

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg
1650	$10.50	*For 1 Device	10	100	16
1651	10.50	†For 1 Device	10	100	16
1652	15.00	For 2 Devices	10	50	8
1653	21.00	For 3 Devices	10	30	6

Sectional Plates

When multi-gang or combination plates are required, they can be quickly and economically assembled as needed by using the various plate sections. Each plate is furnished complete with the correct style mounting strap. Special screws for fastening mounting strap to switch box are supplied with each sectional plate.

		End Section			
1654–1	$15.00	†For 1 Device	10	50	10
1654–2	15.00	For 2 Devices	10	50	10
1654-3	21.00	For 3 Devices	10	30	8
		Center Section			
1655–1	15.00	†For 1 Device	10	50	9
1655–2	15.00	For 2 Devices	10	50	9
1655–3	21.00	For 3 Devices	10	30	7
		Brown Bakelite Head Plate Screws			
1367	$1.00	....	20	100	½

P & S and P & S-Despard Brass Plates

No. 1671-A | No. 1671-B | No. 1671-C | No. 1671-G | No. 1671-N | No. 1671-R

Brass plates for use with P & S-Despard wiring devices are available in .060 metal only. Brush brass is standard finish and will be furnished unless otherwise specified. Can be furnished in a variety of special finishes. Special combination plates can be furnished on order.

Furnished complete with the necessary straps for mounting P & S-Despard wiring devices.

The installation of P & S-Despard convenience outlets, Cat. Nos. 1320 and 1341, in brass plates is not recommended unless installed in Cat. No. 1671-R Brass Plate which is furnished complete with round bakelite insulating adapter designed to fit over the neck of these receptacles. No. 1325 Triplex Outlet Body only not recommended for use with brass plates.

Carton quantity is 10G.

Cat. No.	Per 100	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
1671-A	$22.10	†1-Gang, For 1 Device......	100G	36
1671-B	26.60	2-Gang, For 2 Devices.....	50G	18
1671-C	32.60	3-Gang, For 3 Devices.....	30G	12
1671-G	22.10	*1-Gang, For 1 Device......	100G	36
1671-J	31.10	Blank Plate...............	50G	25
1671-N	33.94	Telephone Plate, ⅜″ Bushing.	50G	18
1671-R	36.60	‡Combination Plate.........	50G	18

*Vertical opening.

†Horizontal opening.

‡With bakelite insulating adapter for installing P & S-Despard receptacle in combination with switch and pilot light.

Unlacquered Brass Plates

P & S and P & S-Despard unlacquered brass plates can be supplied in two ways: 1.—Polished, not lacquered. 2.—Unfinished and unlacquered.

Special Metal Plates

Plates with openings for either P & S or P & S-Despard devices can be supplied in the following special metals: Benedict metal (nickel silver) polished or brushed, .060 or .040 in. thick; aluminum, brushed, .060 in. thick; aluminum, polished, .060 in. thick; bronze (genuine) brushed, .060 or .040 in. thick; bronze (genuine) polished, .060 or .040 in. thick. Can be furnished only in .060 metal for use with P & S-Despard devices.

P & S-Despard Plates

Bakelite and Alabar (Ivory) Wall Plates

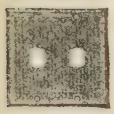
No. 1331

No. 1381

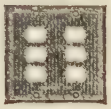
No. 1332

No. 1333

No. 1334


No. 1335

No. 1382


No. 1336

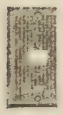
No. 1337

These plates have strong sections, and the wiring device strap furnished with each plate has been designed to form a metal backing or reinforcement for the plate. Plate fastening screws are located at extreme ends near the bevel. Plates will not warp or crack.

Carton quantity is 10.

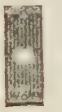
For No. Devices	Cat. No.	Brown Per 100	Std. Pkg.	Wt., Lbs. Std. Pkg.	Cat. No.	Alabar Per 100	Std. Pkg.	Wt., Lbs. Std. Pkg.
				1-Gang				
*1	1331	$10.50	100	16	1431	$18.00	100	16
†1	1381	10.50	100	16	1481	18.00	100	16
2	1332	15.00	50	8	1432	25.00	50	10
3	1333	21.00	30	6	1433	28.50	30	6
				2-Gang				
4	1334	$30.00	30	9	1434	$50.00	30	9
*2	1335	30.00	50	16	1435	50.00	30	10
†2	1382	21.00	50	16	1482	35.00	30	10
6	1336	42.00	20	5	1436	56.00	20	5
				3-Gang				
6	1337	$60.00	20	6	1437	$80.50	20	6

Sectional Plates


No. 1388-1

No. 1388-2

No. 1388-3


No. 1389-1

No. 1389-2

No. 1389-3

When multi-gang or combination plates other than those listed are required, they can be quickly and economically assembled as needed by using the various plate sections illustrated. Special screws for use in fastening mounting strap to switch box are supplied with each sectional plate. These flat head screws permit easy adjustment of mounting strap to obtain proper alignment of plates.

Carton quantity is 10.

For No. Devices	Std. Pkg.	Wt., Lbs. Std. Pkg.	Brown Cat. No.	Brown Per 100	Alabar Cat. No.	Alabar Per 100
			End Section			
†1	50	10	1388–1	$15.00	1488–1	$25.00
2	50	10	1388–2	15.00	1488–2	25.00
3	30	8	1388–3	21.00	1488–3	28.50
			Center Section			
†1	50	9	1389–1	$15.00	1489–1	$25.00
2	50	9	1389–2	15.00	1489–2	25.00
3	30	7	1389–3	21.00	1489–3	28.50

*Vertical opening.
†Horizontal opening.

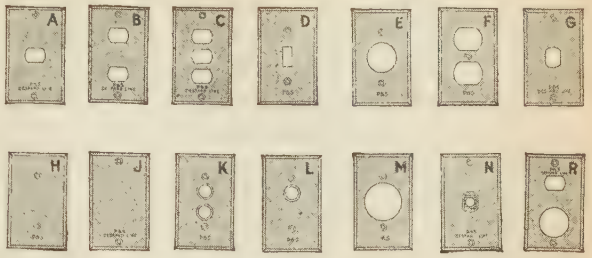
Plate Screws

Brown bakelite plates are furnished as standard with brown plated screws.

Alabar plates are furnished as standard with alabar head screws.

Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Cat. No.	Per 100	Cat. No.	Per 100
20	100	½	1367	$1.00	1467	$1.50

P & S and P & S-Despard Combination Brass Plates



Combination brass plates for P & S wiring devices can be made up in either .040 or .060 metal.

Combination brass plates for P & S-Despard devices can be finished only in .060 metal.

When a combination plate is desired punched with openings for both P & S wiring devices and P & S-Despard devices, such plates can be supplied in .060 metal only.

When combination plates are punched with openings for P & S-Despard devices the correct mounting strap for that particular section of the plate is supplied.

A combination plate must be made up of two or more different symbols.

Standard finishes: .040 metal plates are furnished in either brush brass or Passmour finish; .060 metal plates furnished only in brush brass finish. Can be furnished in a number of special finishes.

The number of gangs, thickness of plate and finish (either brush brass or Passmour) are denoted by the basic catalogue number.

The device openings are designated by symbols following the basic catalogue number. These symbols must be listed after the basic catalogue number in order of arrangement desired reading from left to right when looking at face of plate.

Example: When a 3-gang .060 brush brass plate is specified for 4 P & S-Despard switches and a duplex receptacle, the order should read as follows: 1–1673-BBF.

Basic Catalogue Numbers for Combination Plates

No. of Gangs	.040 Brush Brass Cat. No.	.040 Passmour Cat. No.	.060 Brush Brass Cat.No.
2	1772	L-1772	1672
3	1773	L-1773	1673
4	1774	L-1774	1674
5	1775	L-1775	1675
6	1776	L-1776	1676

Combination Symbols

Symbol	Description
*A	1-Gang, Horizontal, for 1 P & S-Despard Device.
*B	2-Gang, for 2 P & S-Despard Devices.
*C	3-Gang, for 3 P & S-Despard Devices.
D	For Tumbler Switch.
E	For Single Convenience Outlet.
F	For Duplex Convenience Outlet.
*G	1-Gang, Vertical, for 1 P & S-Despard Device.
H	Blank, Fastening Screws on 2 3/8-Inch Centers (P & S).
*J	Blank, Fastening Screws on 3 13/16-Inch Centers, (P & S-Despard).
K	For 2-Button Push Switch.
*L	For 1-Button Momentary Contact Switch.
*M	For 30-Ampere Polarized Receptacle.
*N	Telephone Plate with 3/8-Inch Bushing.
*R	Combination Plate with Bakelite Insulating Adapter for Installing P & S-Despard Receptacle in Combination with Switch or Pilot Light.

*Combination plates available in .060 metal only.

P & S Porcelain Interchangeable 1-Screw Sockets and Parts

Key and Pull—250 Watts, 250 Volts
Keyless—660 Watts, 250 Volts

P & S porcelain 1-screw socket parts are not interchangeable with P & S 2-screw socket parts.

Standard finish of brass caps and chain is nickel flash, but brush brass can be supplied on special order.

No. S-26

Assembled Sockets

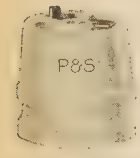
Parts assembled are PA pendant cap and S-26 key body.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
61317	$40.72	10	100	45

Socket Bodies

Key

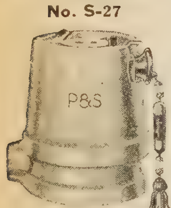
Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
S-26	$29.42	10	100	33
S-38 Shurlok	59.72	10	100	31



No. S-27

Keyless

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
S-27	$26.02	10	100	19
S-39 Shurlok	56.32	10	100	20



No. S-57 Shurlok

Pull

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
S-47	$66.74	10	100	30
S-57 Shurlok	97.04	10	100	33

Above sockets have insulated chain and brass pendant.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
S-4700	$69.78	10	100	33
S-5700 Shurlok	100.08	10	100	33

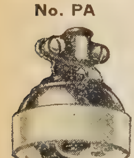
Above sockets have insulated chain and porcelain pendant.

No. PA

Caps

Pendant for Reinforced Cord

Cat. No.	Per 100	Cap. Inches	Carton	Std. Pkg.	Wt., Lbs Std. Pkg
PA	$11.32	..	10	100	13


No. PY

Pendant with Cord Grip

Cat. No.	Per 100	Cap. Inches	Carton	Std. Pkg.	Wt., Lbs Std. Pkg
PY	$28.28	½	10	100	19

No. PC

Straight Nipple—Brass

Cat. No.	Per 100	Cap. Inches	Carton	Std. Pkg.	Wt., Lbs Std. Pkg
PC	$22.62	⅛	10	100	17
PE	27.14	⅜	10	100	17
PZ	38.18	½	10	100	26

Straight Nipple—Aluminum

Cat. No.	Per 100	Cap. Inches	Carton	Std. Pkg.	Wt., Lbs Std. Pkg
PG	$38.18	½	10	100	14

No. PO

90 Degree Angle—Brass

Cat. No.	Per 100	Cap. Inches	Carton	Std. Pkg.	Wt., Lbs Std. Pkg
PO	$85.00	⅜	10	100	28
PU	90.00	½	10	100	37

Bases

Flat Back

For 3¼-Inch Boxes

Diam. base, 3²¹⁄₃₂ in.
Screw spacing, 2¾ in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
PM	$33.94	10	50	28

For 4-Inch Boxes

Diam. base, 3²¹⁄₃₂ in.
Screw spacing, 2¾ in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
PN	$45.24	5	50	36

No. PM

P & S Porcelain Interchangeable 2-Screw Sockets and Parts

No. O-26

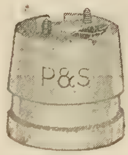
P & S 2-screw porcelain socket parts are not interchangeable with P & S 1-screw porcelain socket parts.

The standard finish of brass caps and brass chain for porcelain pull sockets is nickel flash, but brush brass can be supplied on special order.

Socket Bodies

Key—250 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
O-26	$29.42	10	100	30
O-38 Shurlok	59.72	10	100	31



No. O-27

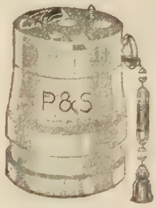
Keyless—660 Watts, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
O-27	$26.02	10	100	20
O-39 Shurlok	56.32	10	100	20

Pull—250 Watts, 250 Volts

Has brass chain and pendant.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
O-47	$66.74	10	100	28



No. O-47

Caps

Pendant for Reinforced Cord

Cat. No.	Per 100	Cap Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
O-PA	$11.32		10	100	13
Straight Nipple—Brass					
O-PC	$22.62	⅛	10	100	17
O-PE	27.14	⅜	10	100	17
O-PZ	38.18	½	10	100	26
Straight Nipple—Aluminum					
O-PG	$38.18	½	10	100	17

No. O-PA

No. O-PC

Bases

Flat Back—For 3¼-Inch Boxes

Diameter base, 3²¹⁄₃₂ in.
Screw spacing, 2¾ in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
O-PM	$33.94	10	50	28

Recessed Back

For 4-Inch Boxes

Diam. base, 4²¹⁄₃₂ in.
Screw spacing, 3½ inches.
Recess, ¼ in. deep.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
O-PN	$45.24	5	50	37

No. O-PM

No. S-62 P & S Porcelain Reflector Socket Bodies

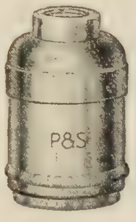
660 Watts, 600 Volts

Designed for use in fixtures and reflectors, suitable for Type C medium base lamps.

Diameter, 1¾ in.; length of body, 2¼ in. Supporting screws spaced 1³⁄₁₆ in. on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
S-62	$28.42	10	100	36

No. 487 P & S Aluminum Shell Sockets



Weatherproof Bayonet Type

660 Watts, 600 Volts

The terminals are easily reached when the body is seated in the cap.

Cat. No.	Per 100	Cap. Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
487	$56.56	½	10	50	17

No. 8000 P & S Aluminum Shell Sockets

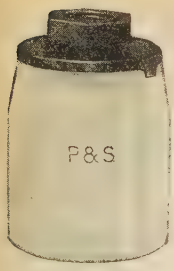
Weatherproof—1-Piece Body

660 Watts, 600 Volts

Designed for use either with or without reflectors. Threaded portion fits Benjamin Benco reflector threads.

Cat. No.	Per 100	Cap. Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
8000	$70.70	½	10	50	11

P & S Porcelain Mogul Sockets



No. 1553

1500 Watts, 600 Volts

Diameter $2\frac{5}{32}$ inches.

Height, $3\frac{1}{8}$ inches.

Height without cap, $2\frac{9}{16}$ inches.

Holes for 8–32 supporting screws are spaced $1\frac{5}{16}$ inches on centers.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1553	$44.22	With $\frac{3}{8}$-Inch Cap	10	50	30
1554	50.52	With $\frac{1}{2}$-Inch Cap	10	50	32
S-1514	40.00	Body Only	10	50	28

P & S 3-Wire Porcelain Mogul Sockets

For 2-Filament Lamps

1500 Watts, 250 Volts

Diameter, $2\frac{5}{32}$ inches.

Height, $3\frac{1}{8}$ inches.

Height without cap, $2\frac{9}{16}$ inches.

Holes for 8–32 supporting screws are spaced $1\frac{5}{16}$ inches on centers.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
1555	$105.00	With $\frac{3}{8}$-Inch Cap	5	50	32
1556	105.00	With $\frac{1}{2}$-Inch Cap	5	50	34
1557	85.00	Body Only	5	50	30

P & S Porcelain Surface Receptacles

660 Watts, 660 Volts

Equipped with rugged terminals and has ample wiring room.

The removable collar is threaded on to the lamp shell. It cannot become loose nor turn because of vibration or jar.

The base is slotted to accommodate either open or concealed wiring.

Outside diameter, $1\frac{7}{8}$ inches; height, $1\frac{7}{8}$ inches.

Holes for supporting screws are spaced $2\frac{3}{4}$ inches on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
598	$22.00	10	100	27

P & S Porcelain Concealed Receptacles

For Outlet Boxes and Ceiling Plates

660 Watts, 600 Volts

Holes for supporting screws are spaced $1\frac{5}{8}$ inches on centers.
Outside diameter of base, $2\frac{5}{16}$ inches.
Height of receptacle, $1\frac{15}{16}$ inches.
The base is cupped $\frac{5}{32}$ inch.
Ample wiring room and rugged terminals.
Base is secured to the outside shell by twin screws in the lamp base.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4000	$38.88	10	100	36

P & S Brass-Covered Outlet Box Receptacles

No. 428

Brush brass is standard finish.
No. 428 is furnished with short chain, long cord and ball.

For $3\frac{1}{4}$ and 4-Inch Boxes

250 Watts, 250 Volts

Outside diameter $4\frac{21}{32}$ inches; height over all, $2\frac{1}{4}$ inches. Holes for supporting screws are spaced $2\frac{3}{4}$ and $3\frac{1}{2}$ inches on centers.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
428	$183.82	Pull	10	50	69

660 Watts, 250 Volts

Outside diameter, $4\frac{21}{32}$ inches; height over all, $1\frac{1}{2}$ inches. Holes for supporting screws are spaced $2\frac{3}{4}$ and $3\frac{1}{2}$ inches on centers.

1010	$84.84	Keyless	10	50	46

For $3\frac{1}{4}$-Inch Boxes

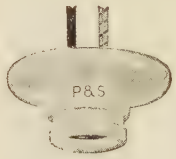
660 Watts, 250 Volts

Outside diameter, $3\frac{21}{32}$ inches; height over all, $1\frac{1}{2}$ inches. Holes for supporting screws are spaced $2\frac{3}{4}$ inches on centers.

1009	$70.00	Keyless	10	50	32

P & S Porcelain Outlet Box Receptacles

660 Watts, 600 Volts



No. 40

Nos. 40 and 122 are equipped with 6-inch leads of No. 14 stranded rubber covered wire. Longer wire leads can be supplied at slight additional charge.

For $3\frac{1}{4}$-Inch Boxes

Outside diameter, $3\frac{1}{2}$ inches; height over all, $1\frac{1}{8}$ inches. Holes for supporting screws spaced $2\frac{3}{4}$ inches on centers.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
40	$40.40	Weatherproof	10	100	76
41	16.84	Keyless	10	100	60

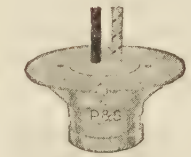
For 4-Inch Boxes

Outside diameter, $4\frac{1}{2}$ inches; height over all, $1\frac{25}{32}$ inches. Holes for supporting screws spaced $3\frac{1}{2}$ inches on centers.

110	$21.06	Keyless	10	50	48
122	48.48	Weatherproof	10	50	56

P & S Outlet Box Receptacles

With Removable Metal Covers



No. 442

Equipped with cadmium plated steel covers which have keyhole slot for quick installation. Can be supplied with black japanned covers without extra charge.

No. 457

Nos. 442 and 443 are equipped with 6-inch leads of No. 14 stranded rubber covered wire. Longer leads can be supplied at slight additional charge.

For $3\frac{1}{4}$-Inch Boxes

Outside diameter, $3\frac{1}{16}$ inches; height over all, $1\frac{3}{16}$ inches. Holes for supporting screws are spaced $2\frac{3}{4}$ inches on centers.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
442	$21.06	Weatherproof	10	100	60
456	15.78	With Screw Terminals	10	100	53

For 4-Inch Boxes

Outside diameter, $4\frac{1}{16}$ inches, height over all $1\frac{3}{16}$ inches. Holes for supporting screws are spaced $2\frac{3}{4}$ inches on centers.

443	$23.16	Weatherproof	5	100	72
457	17.90	With Screw Terminals	5	100	63

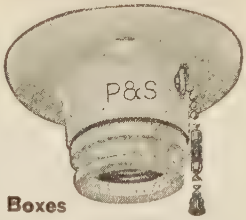
P & S Porcelain Pull Receptacles

With Flush Back

250 Watts, 250 Volts

No. 4010

For 3¼-Inch Boxes



No. 4026

Diameter of base, 3⅝ inches; height over all, 1½ inches. Holes for supporting screws are spaced 2¾ inches on centers.

With Plain Porcelain Ring

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4010	$31.58	Insulated Nickel Chain.....	10	50	41
4010–1	27.36	Short Chain Only..........	10	50	41
4010–2	31.58	Short Chain, Long Cord....	10	50	41
With Shade-Holder Groove Ring					
4026	$31.58	Insulated Nickel Chain.....	10	50	41
4026–1	27.36	Short Chain Only..........	10	50	41
4026–2	31.58	Short Chain, Long Cord....	10	50	41

When a similar device is desired in keyless style, order P & S 41.

For 4-Inch Boxes

Diameter of base, 4¾ inches; height over all, 2$\frac{3}{16}$ inches. Holes for supporting screws are spaced 3½ inches on centers.

With Plain Porcelain Ring

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4040	$42.00	Insulated Nickel Chain.....	10	50	60
4040–1	38.00	Short Chain Only..........	10	50	60
4040–2	42.00	Short Chain, Long Cord....	10	50	60
With Shade-Holder Groove Ring					
4046	$42.00	Insulated Nickel Chain.....	10	50	60
4046–1	38.00	Short Chain Only..........	10	50	60
4046–2	42.00	Short Chain, Long Cord....	10	50	60

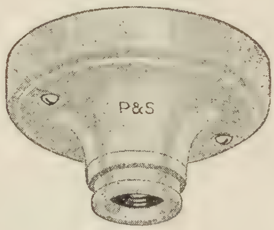
When a similar device is desired in keyless style, order P & S 110.

P & S Porcelain Receptacles

With Recessed Back

Pull—250 Watts, 250 Volts; Keyless—660 Watts, 250 Volts

No. 4011



No. 4058

Designed with deep recessed back to simplify installation when boxes are tilted or project from the wall.

Regularly supplied with shadeholder groove ring, but may be furnished with flared porcelain ring.

Pull type is equipped with short chain and long cord as standard, but can be supplied with 7-inch nickel chain, insulator and pendant without extra charge.

Receptacles are provided with necessary screws, straps and lock nuts for mounting on boxes.

For 3¼-Inch Boxes

Diameter of base, 4 inches; height over all, 2 inches. Holes for supporting screws spaced 2¾ inches on centers.

For Mounting on Boxes with Ears

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4011	$63.16	Pull, Short Chain, Long Cord.	10	50	50
4058	52.69	Keyless......................	10	50	50

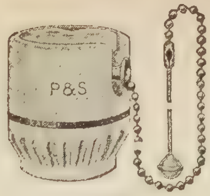
For 4-Inch Boxes

Diameter of base, 4¾ inches; height over all, 2 inches. Holes for supporting screws spaced 3½ inches on centers.

For Mounting on Boxes with Ears

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4012	$73.68	Pull, Short Chain, Long Cord.	10	50	65
4057	63.16	Keyless......................	10	50	65

P & S Porcelain Pull Receptacles



No. 998

For Lighting Fixtures

250 Watts, 250 Volts

These receptacles are fitted with porcelain clamping rings and gaskets, and are for use with units having 1½-inch throat.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
995	$21.06	With 7-Inch Chain............	10	100	35
997	23.16	With 7-Inch Insulated Chain..	10	100	35
998	23.16	With Short Chain, Long Cord.	10	100	35
99700	26.30	With 7-Inch Insulated Chain and Porcelain Pendant.....	10	100	35

P & S Porcelain Screw Ring Receptacles

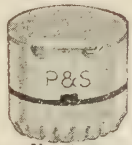
For Signs, Fixtures and Outlet Boxes

Shallow Back

No. 4100

Length of back, $\frac{13}{16}$ inches.

Punch required, 1½ inches.



No. 4101

No. 4114

No. 59108

660 Watts, 600 Volts

With Screw Terminals

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*4100	$10.52	25	250	52
With Screw Terminals Enclosed				
*4101	$12.64	25	250	66
With 9-Inch No. 14 Rubber Covered Wire Leads				
*4114	$13.16	25	250	60
With No. 18 Heat Resisting Wire Leads				
*4118	$7.52	25	250	55
With Screw Terminals 660 Watts, 250 Volts				
59108	$16.16	25	100	22
Porcelain Ring Only for No. 59108				
61990	$6.06	10	100	8

*Furnished with unglazed shell and ring.

No. 6878 P & S Intermediate Base Porcelain Screw Ring Receptacles

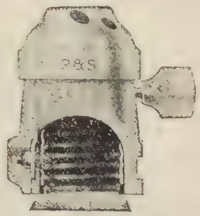
For Metal Signs, Decorative Lighting Etc.

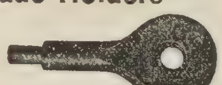
75 Watts, 250 Volts

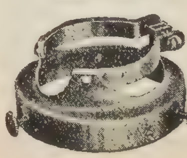
Has removable ring.
Hole required, $1\frac{1}{16}$ inches.

Cat. No.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
6878	25	250	37	$16.96

P & S Porcelain Shurlok Sockets and No. 1245 Shade Holders







The illustration shows how P & S Shurlok Sockets prevent the loss of lamps. The special screw can be operated only with P & S No. 1299 Key.

P & S No. 1299 Keys for use with all Shurlok devices are supplied only when ordered.

The price is 50 cents each net regardless of quantity.

P & S No. 1245 Shade Holders can be used with all porcelain Shurlok devices.

P & S Bakelite Weatherproof Sockets

No. 540 Shurlok

660 Watts, 600 Volts

Resists high temperature and rough handling.

With Shadeholder Groove

Equipped with 6-inch wire leads of No. 14 stranded rubber-covered wire.

No. 630 is the same as No. 540, without shurlok.

No. 542

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
540 Shurlok	$85.34	10	100	20
630	55.04	10	100	21

With 3/8-Inch Female Nipple

Equipped with 6-inch leads of No. 18 rubber-covered fixture wire.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
542	$84.84	10	100	25

No. 43310 P & S Composition Weatherproof Sockets

With Shadeholder Groove

660 Watts, 600 Volts

Resists high temperature and rough handling. Equipped with 6-in. leads of No. 14 stranded rubber-covered wire.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
43310	$12.00	10	100	26

No. 5464 P & S Bakelite Sockets

Weatherproof—Pin Type

660 Watts, 250 Volts

For use in temporary decorative lighting work. It is not necessary to strip the wires when using this socket. May be disconnected from wire and used again and again.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5464	$18.95	10	100	13

No. 6000 P & S Intermediate Base Bakelite Weatherproof Sockets

75 Watts, 250 Volts

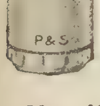
This socket will resist high temperature and rough handling. Equipped with 6-inch leads of No. 18 rubber-covered fixture wire.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6000	$16.96	25	100	6

P & S Porcelain Sign Receptacles

For Metal Signs—Candelabra Base

75 Watts, 125 Volts



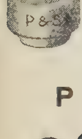
Approved for indoor use only.

Punch required, 25/32 inch in diameter. Length of back, 5/16 inch. Wires, 3/4 inch from surface.

Porcelain ring and gasket.

Cat. No.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
878	25	100	10	$28.28

No. 422 P & S Miniature Base Porcelain Weatherproof Sockets



75 Watts, 125 Volts

This socket will resist high temperature and rough handling. Equipped with 6-inch leads of No. 18 rubber-covered fixture wire.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
422	$24.88	25	100	7

P & S Porcelain Suspension Cleats

Weatherproof

660 Watts, 600 Volts

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
430	$9.90	Wires 3/4 In. Apart	10	100	10
291	16.96	Wires 2½ In. Apart	10	100	22

Benco Weatherproof Sockets

With Type S (1 11/16-Inch Diam.) Screw Thread

National Electrical Code Standard

No. 4200

Benco Sockets are made for industrial or heavy duty use. They have highly insulated, rugged interior and strong metal casing. Thread on casing may be used for attaching reflectors with S holder and Benco holders.

Keyless Type—Medium Base

660 Watts, 600 Volts

Keyless sockets have a porcelain interior and lamp grip. Standard package, 50; carton, 10; weight, 17 pounds.

Casing Material	Finish	Tapped for ½-Inch I. P. Connection Cat. No.	Per 100	Tapped for 3/8-Inch I. P. Connection Cat. No.	Per 100
Aluminum	Pol. Alum.	*4200	$70.70	*4201	$70.70
Brass	Brush Brass	4202	85.00	4203	85.00
Copper	Nat. Copper	*4204	70.70	*4205	70.70

*Also furnished in lots of 1000 at $56.00 per 100.

Pull Chain Type—Medium Base

660 Watts, 250 Volts

No. 4207

The inner-pull is a big feature of these Benco Sockets. It is a means to make them weatherproof and the chain action is unobstructed.

Molded composition interior and Benjamin Lamp Grip.

Standard package, 50; carton, 10; weight, 17 pounds.

Pull socket interior packed 50 in a standard package; carton, 10; weight, 13 pounds.

Casing Material	Finish	Tapped for ½-Inch I. P. Connection Cat. No.	Per 100	Tapped for 3/8-Inch I. P. Connection Cat. No.	Per 100
Aluminum	Pol. Alum.	4225	$140.00	4226	$140.00
Brass	Brush Brass	4207	140.00	4208	140.00
Copper	Nat. Copper	4236	140.00	4237	140.00

No. 4209, Pull Socket Interior Only..........per 100 $90.00

Benjamin Benco Threaded Holders

With Type S (1 11/16-Inch Diam.) Screw Thread

Benco Holders provide an easy means for attaching shades or reflectors to the Benco Sockets and Outlet Box Fittings. These holders are made to fit any glass or metal reflectors with standard neck sizes.

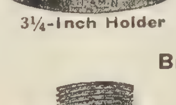
It should be noted, while considering the Benco Holders, that Benjamin Porcelain Enameled Steel Reflectors are furnished with holders for attachment to Benco Sockets and Outlet Box Fittings.

Polished Aluminum Holders—Weatherproof

2¼-Inch Holder

Cat. No.	Per 100	Size In.	Std. Pkg.	Carton	Wt., Lbs. Std. Pkg.
4215	$28.28	2¼	50	10	3
4217	42.42	3¼	50	10	4

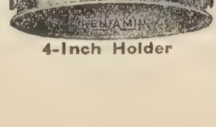
Copper Holders—Weatherproof



3¼-Inch Holder

Cat. No.	Per 100	Size In.	Std. Pkg.	Carton	Wt., Lbs. Std. Pkg.
4370	$28.28	2¼	50	10	8
4372	42.42	3¼	50	10	9
4373	72.00	4	50	10	10

Brushed Brass Holders



4-Inch Holder

Cat. No.	Per 100	Size In.	Std. Pkg.	Carton	Wt., Lbs. Std. Pkg.
4377	$28.28	2¼	50	10	8
4379	42.42	3¼	50	10	9
4380	72.00	4	50	10	10

Benjamin Aluminum Weatherproof Sockets

For Use Without Shade Holders

National Electrical Code Standard

660 Watts, 600 Volts

Especially designed for exterior and heavy duty service where no shade holder or reflector is required.

Keyless, medium base socket interior is one-piece porcelain of easy-to-wire design and high insulating properties. The strong aluminum casing protects the porcelain interior and makes the socket entirely weatherproof. Casing is separable for removal of porcelain interior for wiring.

Polished aluminum finish.

Standard package, 50; carton, 10; weight, 17 pounds.

No. **4121**, Tapping ⅜-Inch....................per 100 **$56.56**

No. **4123**, Tapping ½-Inch....................per 100 **56.56**

Also furnished in 1000 lots at $52.00 per 100.

No. 91 Benjamin Medium Base Socket Extensions

660 Watts, 250 Volts

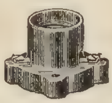
This medium base socket extension is equipped with a bead for shade holder and provides a means of attaching glassware to flush sockets or ceiling receptacles.

In long narrow shades where the lamps are set too high for the best effects, No. 91 may be used to lower the lamps ⅞ inch.

Standard finish is lacquered brass.

Cat. No.	Description	Std. Pkg.	Carton	Wt., Lbs. Std. Pkg.	Per 100
91	With Bright Brass Casing Having Uno Shade Holder Bead.......	50	10	10	$17.00

H & H Bakelite Cleat Receptacle



Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt., Lbs.
50715-C	$10.00	Pony Size....................	10	100	12

Federal Porcelain Clamp Sockets

Weatherproof Outlet Box Receptacles

Standard package, 100.

Cat. No.	Description	Price
304B	Edison Socket, Screw Contact	$.50
303B	Weatherproof Socket, with 6-Inch Leads.................	.60

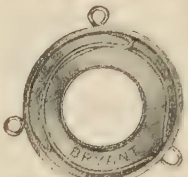
GraybaR QUALITY Since 1869
Everything Electrical
GraybaR ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

Bryant Shade-Holders

Ventilated Uno

No. 501

No. 504



No. 533

Uno Shade-Holders attach directly to the threaded bead on medium base sockets and receptacles. Because of the wedge thread, the fit between socket-shell and holder is rigid.

Cat. No.	Per 100 Finished	Per 100 Unfinished	Size In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
With Screws to Hold Shade						
501	$8.40	$7.70	2¼	50	500	22
505	24.24	21.30	3¼	25	250	27
511	33.58	29.96	4	10	100	17
With Spring Grip to Hold Shade						
502	$12.96	$12.26	2¼	50	250	15
504	25.96	23.18	2¼	25	100	11
Solid Uno — With Spring Grip to Hold Shade						
533	$14.78	$13.06	2¼	50	250	15

Bryant Emergency Shade-Holders

Emergency Shade-Holders made with spring grip only, are designed for medium screw base porcelain sockets and receptacles. They are not approved for use on circuits exceeding 250 volts. The screw shell of the shade-holder is insulated from the body of the shade-holder and screws over the shell of the socket or receptacle without interfering with the lamp.

No. 443

Solid

Cat. No.	Per 100	Size In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
443	$31.10	2¼	25	100	7

Bryant Uno Fixture Ring

No. 549

This ring is provided with the Uno thread and is used for attaching ornamental pieces to sockets.

Cat. No.	Per 100	Size In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
549	$8.84	...	50	200	4

Bryant Weatherproof Shade-Holders

Used with any medium base porcelain or composition socket or receptacle provided with a shade-holder groove.

Cat. No.	Size Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price per 100 Finished
628	2¼	25	250	15	$15.80
629	3¼	10	100	9	22.98

Hubbell Pull Socket Attachments

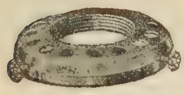
Special finishes same advance as socket caps.

Cat. No.	Per 100	For Reflectors Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
For Brass Shell Pull Sockets					
5828	$38.88	8, 10 and 12	25	100	8
5829	38.88	14	25	100	9
For Porcelain Pull Sockets					
5957	$38.88	8, 10 and 12	25	100	8
5958	38.88	14	25	100	9

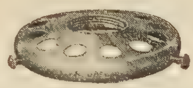
Composition Bushing

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5380	$.80	⅛-Inch Socket Bushing....	200	1000	3
5381	2.12	⅜-Inch Socket Bushing....	200	1000	10

Hubbell Direct Threading 3-Screw Type Shade Holders



No. 501



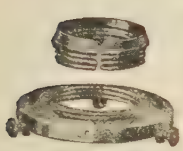
No. 505

These shade holders can be furnished less screws, untapped and unfinished. Prices quoted upon application.
Standard finish is brush brass.

Cat. No.	Size Inches	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price per 100
501	2¼	Finished, Ventilated...	50	500	28	$8.40
501	2¼	Unfinished, Ventilated.	50	500	28	7.70
505	3¼	Finished, Ventilated...	25	250	30	24.24
505	3¼	Unfinished, Ventilated.	25	250	30	21.30

Hubbell 3-Screw Type Shade Holders

With Contractile Collars



No. 5339

No. 5594

Hubbell Shade Holders with contractile collar will fit threaded shell sockets equally as well as the beaded shell, but will not fit combination threaded and beaded shells.

The contractile collar type is recommended where absolute security is desired.

Standard finish, brush brass.

Cat. No.	Per 100	Size Inches	Description	Carton	Std. Pkg.	Wt., Lbs. St. Pkg.
5339	$7.70	2¼	Ventilated, Finished....	50	500	28
5594	12.02	2¼	Solid Top, Finished.....	50	500	30
5340	24.24	3¼	Ventilated, Finished....	25	250	25
5596	22.48	3¼	Solid Top, Finished.....	25	250	27
5595	29.06	4	Ventilated, Finished.....	25	100	14

No. D1675, Finished, Separate Split Rings, Standard Package, 200..............................per 100 $2.82

No. 5528 Hubbell Shade Holders

Locking Spring Type

Ventilated. Size, 2¼ inches. Carton, 50. Standard package, 250. Weight, 16 pounds. Standard finish, brush brass.

Price, Finished........per 100 $14.78

Hubbell Shade Holders

For Medium Base Weatherproof Sockets

No. 6633

No. 6634

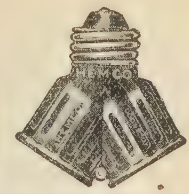
Standard finish is brush brass.

Cat. No.	Per 100	Size Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6633	$15.80	2¼	25	200	13
6634	22.98	3¼	10	100	15
6635	45.24	4	10	100	20

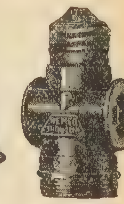
Hemco Cube-Taps, Twin-Lite, and Thru-Lite Plugs

No. H17
Cube-Tap

No. H18
Cord Cube-Tap



No. H20
Twin-Lite



No. H204
Thru-Lite

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
H17	$7.36	Templus Cube-Tap..........	20	100	10
H18	8.42	Templus Cord Cube-Tap.....	20	100	9
H20	13.00	Templus Twin-Lite..........	10	100	12
H204	22.00	Templus Thru-Lite..........	10	100	16

No. H706 Hemco Templus Plug Bodies

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
H706	$3.80	50	500	18

Hemco Templus and Rubber Handle Caps

No. HF

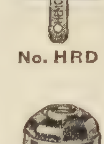
Templus Handle Caps

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
HF	$4.60	With 11/32-Inch Hole.	25	100	5

Nos. HRE and HRF

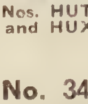
Rubber Handle Caps

HRA	$10.00	.312 to .390-In. Hole	25	100	7
HRB	10.00	.260 to .312-In. Hole	25	100	7
HRE	10.00	.312 to .390-In. Hole	25	100	14
HRF	10.00	.260 to .312-In. Hole	25	100	14
HRS	30.00	.578-Inch Hole......	25	100	6



No. HRD

HRD	10.50	With .425-Inch Hole	50	100	9



Nos. HUT and HUX

Templus Caps

HUT	$3.30	9/32x3/8-Inch Hole....	50	500	19
HUX	3.30	1/4x3/16-Inch Hole....	50	500	19

No. 345 Bryant Attachment Plugs

Molded Weatherproof, Fuseless

660 Watts, 600 Volts

No. 345 plug is fitted with 6 inches of No. 14 B. & S. stranded rubber covered wire. Longer wires on special order. Extra charge, 9 cents list per foot each conductor.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
345	$31.10	10	250	44

No. JX Bryant Composition Caps

With Cord Grip

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

7/16-inch cord hole.

Steel armored cap, cadmium-plated.

With cord grip.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
JX	$32.00	10	50	6

No. KG Bryant Composition Motor Attachment Caps

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Has 13/32-inch cord hole.

Base is 1 17/32 inches in diameter and 11/16 inches thick. Screw spacings, 1 inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
KG	$15.76	10	50	4

No. TW Bryant Double T Caps

With Cord Grip—For Heavy Duty

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Armored cadmium-plated cap.

Has 13/32-inch cord hole.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
TW	$53.32	10	30	4

No. TV Bryant Double T Caps

For Heavy Duty

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Brown Templus cap.

Has 13/32-inch cord hole.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
TV	$46.66	10	50	3

No. KL Bryant Composition Adapters

660 Watts, 250 Volts

Diameter, 1 9/16 inches.
Length, 1 15/32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
KL	$36.36	10	50	7

No. UR Bryant Spartan Flush Motor Plug Caps

Back Connected

15 Amps., 125 Volts; 10 Amps., 250 Volts

Diameter of cup, 1½ inches. Depth, 1¼ inches. Screw hole spacing, 1 15/16 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
UR	$36.36	10	50	7

No. KE Bryant Composition Pilot Caps

15 Amperes, 125 Volts

Furnished with brass guard and lamp for 125 volts.

Diameter, 1⅜ inches.

Length, 3½ inches.

Extra lamp, No. 618, for this cap is listed on another page.

When No. 618 lamp is omitted deduct $35.00 per 100 lamps from price of No. K.E.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
KE	$106.66	10	10	2

No. 105 Bryant Porcelain Receptacles

Concealed Base

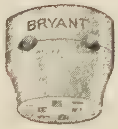
15 Amperes, 125 Volts
10 Amperes, 250 Volts

Diameter of base is 2 7/32 inches. Height, 1⅜ inches. Screw spacing, 1½ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
105	$40.00	10	50	15

No. 112 Bryant Porcelain Outlet Box Receptacles

15 Amperes, 125 Volts; 10 Amperes, 250 Volts



Base diameter, 1¾ inches. Top diameter, 1 13/32 inches. Height, 1½ inches.
Screw spacing, ⅝ inch.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
112	$40.00	10	50	13

No. 114 Bryant Porcelain Outlet Box Cover Receptacles

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Requires hole 1 7/16 in. in diam. Diam. is 1 11/16 in.; projects ½ in. above and 1 in. below cover; distance from back of cover to bottom of wire grooves, 11/16 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
114	$40.00	10	50	14

No. 103 Spartan Composition Cord Connector Bodies

15 Amperes, 125 Volts
10 Amperes, 250 Volts

Diameter, 1⅜ inches. Cord hole, 13/32 inch.
Length, 1⅜ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
103	$36.36	10	50	6

No. H130 Hemco Cord Connector Bodies

Templus

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt. Lbs.
H130	$13.00	25	50	4

Bryant Receptacles

For Mounting in Canopies

15 Amps., 125 Volts; 10 Amps, 250 Volts

No. 724 Templus

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
724	$30.30	With 6-Inch Wires	10	50	4
		No. 724-C White Porcelain			
724C	$18.18	Without Wire Leads	10	50	6

No. 113 Bryant Composition Outlet Box Bodies

For ½-Inch Knockouts

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Does not have tandem slots
Will not take polarity caps.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
113	$33.34	10	50	6

Bryant Templus Flush Receptacles

For Plates without Doors

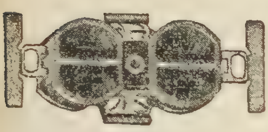
15 Amps., 125 Volts; 10 Amps., 250 Volts Each Outlet

Top Wiring Terminals

No. 4810 Single

Depth, 27/32 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4810	$29.00	10	100	15



No. 4812 Duplex

Depth, 29/32 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4812	$38.38	10	100	15

Side Wiring Terminals

No. 4831 Single

Depth, 21/32 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4831	$22.00	10	100	14

No. 4832 Duplex

Common Feed, Common Ground

Two binding screws in each side wiring terminal.

Depth, 27/32 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4832	$29.00	10	100	18

No. 4832X Duplex

Separate Feed, Separate Ground

Depth, 27/32 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4832X	$35.06	10	100	18

No. 4832Y Duplex

Separate Feed, Common Ground

Depth, 27/32 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4832Y	$35.06	10	100	18

No. 770 for Tumbler Switch Plate

For use with Templus plates only. Depth, 7/8 in.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
770	$22.22	10	100	14

Hemco Templus Receptacles

No. H141

No. H142

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
H141	$9.48	Single Receptacle....	10	100	12
H142	12.64	Duplex Receptacle...	10	100	14

Bryant Top Wired Duplex Flush Receptacles

With Templus Plate Having Integral Bosses

15 Amps., 125 Volts; 10 Amps., 250 Volts, Each Outlet

Body and plate are of brown Templus.

Top wiring terminals, with two binding screws in each side.

Templus shoulders protect the screws and hold the wires in place.

Completely enclosed moisture-proof bakelite back.

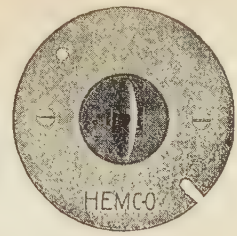
Base is 2 13/16x1 11/16 inches.

Depth, 29/32 inches.

Supporting screw spacing, 3 9/32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4822	$58.98	10	100	29

Hemco Outlet Box Receptacles



No. H341

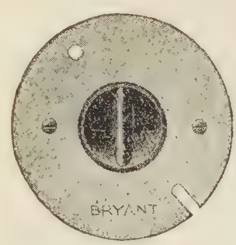
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
H341	$23.32	Single, on 3¼-Inch Box Cover..	10	50	16
H342	26.32	Duplex, on 3¼-Inch Box Cover.	10	50	25
H441	24.22	Single, on 4-Inch Box Cover...	10	50	25
H442	27.36	Duplex, on 4-Inch Box Cover...	10	50	23

Bryant Outlet Box Receptacles

Brown Templus—With Cadmium Covers

15 Amps., 125 Volts; 10 Amps., 250 Volts Each Outlet

These devices are provided with side-wired brown Templus receptacles. Binding terminal screws are No. 8, which are heavier and with larger heads than ordinarily used on devices of this type. The receptacles are also provided with raised ribs which facilitate insertion of caps in the concave surfaces.



No. 3780, Single

No. 3781, Duplex

Single, Side Wired

Cadmium-Plated Covers

Cat. No.	Per 100	Size Box In.	Carton	Std. Pkg.	Pkg. Wt. Lbs.
3780	$29.00	3¼	10	100	40
4780	30.00	4	5	50	28

Duplex, Side Wired

Cadmium-Plated Covers

Cat. No.	Per 100	Size Box In.	Carton	Std. Pkg.	Pkg. Wt. Lbs.
3781	$36.00	3¼	5	50	21
4782	37.00	4	5	50	28

Bryant Round Porcelain Receptacles

15 Amperes, 125 Volts

10 Amperes, 250 Volts

No. 115

Suitable machine screws are furnished for mounting these devices on boxes.

The standard finish is brush brass which will be furnished when no finish is specified.

No. 733

With Solid Brass Plate

Cat. No.	Per 100	Diam. Plate In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
115	$103.02	2¾	1	50	19
116	115.14	3⅝	1	50	28
With Ears					
733	$26.26	...	10	50	9

GraybaR
Quality
Since 1869
Distributed and guaranteed by
GraybaR
ELECTRIC COMPANY

Bryant Receptacle and Switch Combinations

Single Gang—Porcelain Cups

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

No. 2957

Switches operate horizontally.

Carton, 1. Standard package, 10.

With .060-Inch Brass Plate

Cat. No.	Per 100	Type Switch	Wt., Lbs. Std. Pkg.
2957	$163.62	Double Pole	7
3957	163.62	Single Pole Quadruple Break	7

With Brown Templus Plate with Integral Boss

2979	$163.62	Double Pole	5
3979	163.62	Single Pole Quadruple Break	5

Bryant Receptacle and Switch Combinations

Single Gang—Templus Cups

Each combination includes a Spartan Receptacle and an indicating flush tumbler switch which operates vertically. Carton 1, Standard package, 10.

No. 2994

With .060-Inch Brass Plate

10 Amperes, 250 Volts

Cat. No.	Per 100	Type Switch	Wt., Lbs. Std. Pkg.
2994	$175.74	Double Pole	6
3994	175.74	Single Pole Quadruple Break	6

20 Amperes, 250 Volts

2995	$187.86	Double Pole	6
3995	187.86	Single Pole Quadruple Break	6

With Brown Templus Plate with Integral Boss

10 Amperes, 250 Volts

2989	$175.74	Double Pole	5
3989	175.74	Single Pole Quadruple Break	5

20 Amperes, 250 Volts

2999	$187.86	Double Pole	7
3999	187.86	Single Pole Quadruple Break	7

Bryant Pilot Light Combinations

10 Amperes, 125 Volts

Combination of one switch and one pilot light with brass guard, with .060-inch plate, ready-wired, 1-gang.

Porcelain cup is $2^{11}/_{16}$ inches long, $1^{11}/_{16}$ inches wide, and $1^{3}/_{8}$ inches deep.

Supporting screw holes are spaced $3^{9}/_{32}$ inches on centers vertically for installation in a standard 1-gang outlet box.

The lamp is in circuit when the switch is closed, so this device can be used for the control of cellar lights, garage and attic lights and in many other places where a tell-tale is desired.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2959	$282.80	Double-Pole Tumbler Switch	1	10	8
3959	282.80	Single-Pole Quadruple Break Tumbler Switch	1	10	8

Price of either of the above combinations, without plates, is $214.92 per 100 list.

Brass Flush Plates Only with Lamp Guards

OM261	$67.88	For Nos. 2959 and 3959	1	10	6

Bryant Receptacle and Pilot Lamp Combinations

10 Amperes, 125 Volts

Single gang.

With porcelain cup.

Plate, $2^{3}/_{4}$x$4^{1}/_{2}$ inches.

Suitable machine screws are furnished for mounting on boxes.

The standard finish is brush brass which will be furnished when no finish is specified.

Carton, 1. Standard package, 10.

Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
5121	$181.80	With .060-Inch Brass Plate	15
5122	181.80	With Brown Templus Plate	..

No. 763 Bryant Pilot Light Combinations

10 Amperes, 125 Volts

Ready-wired combination of one duplex flush receptacle, one pilot light, with solid plate, 2-gang.

The insertion of the plug illuminates the bull's eye.

Porcelain cup is $2^{9}/_{16}$ inches long, $3^{1}/_{2}$ inches wide, $1^{5}/_{8}$ inches deep.

Four supporting screw holes, spaced $3^{9}/_{32}$ inches on centers vertically and $1^{13}/_{16}$ inches on centers horizontally for installation in standard 2-gang outlet box.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
763	$365.52	1	10	16

Bryant 3-Wire Duplex Flush Receptacles

15 Amperes, 125 Volts; 10 Amperes, 250 Volts Each Outlet

No. 4326

The use of 3-wire outlets in place of the usual 2-wire receptacles is becoming more general. Safety considerations usually demand the grounding of home and industrial appliances. This can best be done by using 3-wire cord with suitable caps and receptacles.

Side Wired

For use with standard duplex receptacle plates (V section).

Base, $2^{13}/_{16}$x$1^{15}/_{32}$ inches.

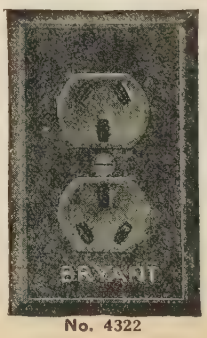
Depth, $^{27}/_{32}$ inch.

Supporting screw spacing, $3^{9}/_{32}$ inches.

No. 4327 has grounded yoke.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4326	$166.66	10	30	3
4327	166.66	10	30	3

Top Wired



No. 4322

Complete with Templus plate, having integral bosses.

No. 4323 has grounded yoke.

Base, $2^{13}/_{16}$x$1^{11}/_{16}$ inches.

Depth, $^{27}/_{32}$ inch.

Supporting screw spacing, $3^{9}/_{32}$ inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4322	$170.70	10	30	8
4323	170.70	10	30	8

Nos. 4326 and 4322 are for use with systems grounded by a third wire. Nos. 4327 and 4323 are for use with systems of grounded rigid or flexible conduit.

Bryant Bull's Eye Jewels, Receptacles, Lamps, Plates, and Switch Plate Inserts

The Bryant Bull's Eye is a warning signal of great utility and convenience. It consists of a ruby glass jewel fastened in the center of a flush plate of standard dimensions, behind which is a small electric lamp in a special receptacle. This lamp is wired in multiple with the devices whose operation it indicates.

Green, clear, opalescent, amber, or blue jewels can be furnished on special order without extra charge.

No. 737

Ruby Jewels

Round, for Mounting in "F" Plates

With ventilated brass ring.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
737	$106.06	10	30	2

No. 746

Rectangular, for Mounting in Slot of an "S" Plate

With solid rim.

746	$35.36	10	30	1

Flush Lamp Receptacles for Use with Jewels

No. 427

75 Watts

With No. 618 125-volt lamp.

Will take either Form H or Type S-7 candelabra base lamps, rated 125 volts.

Porcelain cups, $2^{9}/_{16}$ inches long; $1^{11}/_{16}$ inches wide; $1^{5}/_{8}$ inches deep.

Supporting screw spacing, $3^{9}/_{32}$ inches.

May be installed individually or may be mounted in a combination with switches and receptacles and the entire combination covered by a single flush plate.

427	$98.98	10	30	11

No. OL241

Louvre Plate for Use with Flush Lamp Receptacles

Can be used with No. 427 receptacle.

Made in .040-inch brass only.

Single gang.

OL241	$113.12	10	30	18

No. 618

Flush Lamp Receptacles

125 Volts

Candelabra base, 6 watts Mazda.

For No. 427 receptacle, and also Nos. KE, 2959, and 3959.

618	$49.50	10	30	3

No. 756

Insert to Fill Opening in "S" Plate

Brown bakelite. Insert on metal yoke.

756	$21.22	10	30	1

No. 3851

Receptacle with No. 618 Lamp for Plates with Removable Bull's Eye

3851	$98.98	10	30	9

No. 3850

Round Jewel, Solid Ring, Removable Bull's Eye

3850	$35.36	10	30	..

Bryant 3-Wire Caps, Connectors and Receptacles

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

No. 9111

Caps

Brown Templus

Cat. No.	Per 100	Cord Hole In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9110	$38.88	$1^{3}/_{32}$	10	50	4

Composition

9111	$33.34	$1^{3}/_{32}$	10	50	6

No. 9112 and 9322

Composition, with Armored Cord Grip

9112	$53.32	$1^{7}/_{32}$	10	50	8

Flush Motor Plug Cap

9115	$73.32	...	10	50	13

No. 9115

Composition Cord Connectors

Body

9113	$66.66	$1^{3}/_{32}$	10	50	9

Body, with Armored Cord Grip

9114	$86.66	$1^{7}/_{32}$	10	50	11

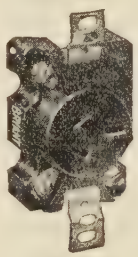
No. 9113 and 9323

Receptacles

Bases of Nos. 9116 and 9120 are $2^{1}/_{2}$x$1^{5}/_{8}$ inches. Depth, $1^{1}/_{8}$ inches. Supporting screw spacing, $3^{9}/_{32}$ inches. Top wiring terminals. Take standard F plates.

Composition Flush

9116	$113.32	...	10	50	15


No. 9116 and 9326

Porcelain, Flush Conduit Box

Templus top, screw terminals.

9117	$53.32	...	10	50	12

Porcelain Concealed Base

9119	$66.66	...	10	50	19

No. 9119 has supporting screw spacing of $1^{3}/_{4}$ inches.

Composition Flush, with Grounding Terminal Connected to Yoke

9120	$113.32	...	10	50	15

No. 9117

20 Amperes, 250 Volts

Cord Grip Cap

Steel covered, cadmium-plated.

9322	$86.66	$^{5}/_{8}$	10	20	5

Composition Cord Connector

With steel covered cap, cadmium-plated.

9323	$146.66	$^{5}/_{8}$	10	20	7

No. 9119 and 9325

Porcelain Receptacles

Flush

Base, $2^{9}/_{16}$x$1^{5}/_{8}$ inches.

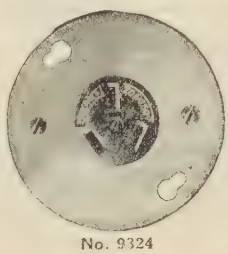
Depth, $1^{3}/_{8}$ inches.

Screw spacing, $3^{9}/_{32}$ inches.

Takes standard F plate.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9326	$126.66	10	30	15
9326-G	126.66	10	30	13

No. 9326-G has grounded yoke.


No. 9324

Concealed Base

Base, $2^{1}/_{2}$-inch diameter.

9325	$86.66	10	30	25

For 4-Inch Outlet Box

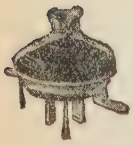
With cadmium-plated cover.

9324	$139.98	5	30	20

Bryant 3-Wire Polarized Caps and Receptacles

Heavy Duty

3-Wire Polarized Caps



No. 786

With Screw Terminals
30 Amperes, 250 Volts

Composition cap, with grounding prongs and ¾-inch cord grip.

Has ears for permanently attaching cap to the plate; also for ground connection. Ears can be removed if not required.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
786	$141.40	1	10	6

No. 776

With Solder Lugs
60 Amperes, 125 Volts
40 Amperes, 250 Volts

Composition caps, with grounding prongs and clamp for armored conductor.

Straight Clamp				
775	$197.96	1	10	15
Angle Clamp				
776	$212.10	1	10	16

3-Wire Polarized Receptacles with Solder Lugs

60 Amperes, 125 Volts; 40 Amperes, 250 Volts

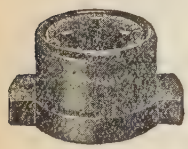
No. 757

Nos. 747 and 787 fit (Universal) No. 72C102 cover for 4 11/16-inch square box.

Porcelain Surface Receptacle

Mounting screw spacing, 2 15/16 inches.

747	$98.98	5	10	10
Porcelain Flush Receptacle				
757	$438.34	1	10	11



No. 787

Composition Surface Receptacle

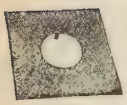
Mounting screw spacing, 2⅞ inches.

787	$155.54	5	10	7

Flush Plates for 3-Wire Receptacle No. 757

These plates are 5½ inches square with 2 9/32-inch center hole and are fitted with contacts for grounding prongs.

Supporting screw spacings are 3⅛x3 5/32 inches to fit No. 758 plaster box cover.



No. 691

Solid Brass Plate

Standard finish is brush brass.

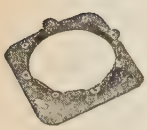
691	$141.40	1	10	10

.060-Inch Cadmium-Plated Steel Plate

Has square edges and square corners.

788	$70.70	1	10	5

Box Covers for 3-Wire Receptacle No. 757

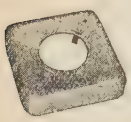


No. 758

For Plaster Box

758	$70.70	1	10	5

For 4 11/16-Inch Box



No. 759

Will fit No. 72171 Box, as manufactured by General Electric Company, National Electrical Products Company, Roach-Appleton Mfg. Company, and Steel City Electric Company.

759	$141.40	1	10	8

Bryant Triple-Pole Outlet Receptacles and Fittings

Heavy Duty

3-Wire Cord Sets

No. 3829

No. 3831

These cord sets are mechanically and electrically perfect. Cap and lug joints are proof against loosening.

Complete protection against cord defects and trouble.

Length, 38 inches.

All-Rubber Sets with Cap

Cat. No.	Per 100	Conductors	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
3829	$272.70	Two No. 8, One No. 10	35	35	1	10	10
3830	323.20	Two No. 6, One No. 8	50	40	1	10	19
Armored Sets with No. 776 Cap							
3831	$545.40	Three No. 8	35	35	1	10	50
3832	646.40	Three No. 6	50	40	1	10	43

No. 3826

3-Wire Surface Range Receptacle

High heat black composition. Rugged construction.

Has opening for ¾-inch conduit and knockout for 1-inch conduit.

Cat. No.	Per 100	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt., Lbs.
3826	$181.80	50	40	2	10	14

No. 3827

Grounding Strap for No. 3826

With Separate Ground

Range grounding strap is readily attached.

3827	$40.40	..	..	2	10	1

No. 3828

Tube and Connector Clamp for Three No. 6 Wires

Protects and grips non-metallic cable where it passes through the floor.

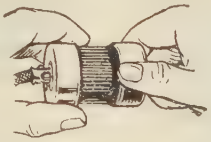
3828	$70.70	..	..	2	10	3

Hubbell Twist-Lock Devices

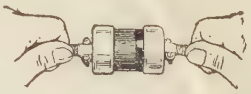
National Electric Code rules advise installation of polarized and grounded devices to protect the users of portable motor driven tools and equipment.

Many industrial plants, equipping with 3 and 4-wire protective devices, are specifying Twist-Lock to end the work-interrupting disconnection nuisance which troubles users of portable equipment. Twist-Lock Devices never part in the middle of a job, no matter how hard the cord is yanked about. A lock-fast connection is made by a twist of the cap.

1. Plug in-



2. Twist-



3. They're locked!

2-Wire Twist-Lock Caps

10 Amperes, 250 Volts

No. 9763

No. 7102

No. 7062

Rubber Cord Grip Caps

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9763	$48.48	9/16-Inch Cord Hole	10	30	5
*9764	54.54	9/16-Inch Cord Hole	10	30	5
9765	54.54	5/8-Inch Cord Hole	10	30	5
*9766	54.54	5/8-Inch Cord Hole	10	30	5
		Metal Covered Cord Grip Caps			
7102	$48.48	9/16-Inch Cord Hole	10	30	7
*9102	48.48	9/16-Inch Cord Hole	10	30	7
7238	48.48	5/8-Inch Cord Hole	10	30	7
*9103	48.48	5/8-Inch Cord Hole	10	30	7
		Composition Caps			
7062	$36.36	13/32-Inch Cord Hole	10	50	7
*7063	36.36	13/32-Inch Cord Hole	10	50	7

*Polarized—One wide and one narrow blade.

2-Wire Porcelain Flush Receptacles

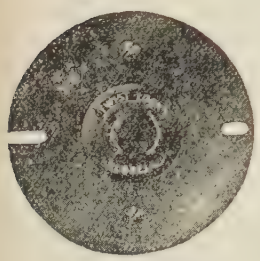
10 Amperes, 250 Volts

This receptacle may be used with either polarized or non-polarized Twist-Lock Caps.

Supporting screw holes spaced 3 3/32 inches.

No. 7210 receptacle fits any standard single convenience outlet plate.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7210	$48.48	10	50	13



With 3 1/4-Inch Cover

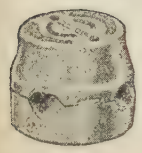
Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7216	$54.54	5	50	27

With 4-Inch Cover

7217	$60.60	5	30	18

Standard finish of covers is cadmium finish. Black japan covers may be had on special order at no advance in price.

2-Wire Porcelain Receptacles



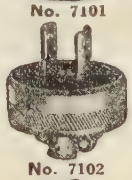
10 Amperes, 250 Volts

Mounting screws 3 1/32 inch on centers. Diameter 1 3/4 inches, height 1 27/64 inches. Face diameter 1 1/2 inches.

Similar to Cat. No. 5624, but is of the Twist-Lock Type and polarized.

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7624	$48.48	Receptacle	..	10	50	14

No. 7101



No. 7102

No. 7191

2-Wire Cord-Grip Connectors

10 Amperes, 250 Volts

Composition. Steel covered, cadmium plated.

Bodies may be used with either polarized or non-polarized caps.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
		With 9/16-Inch Cord Hole			
7101	$72.72	Body Only	10	30	10
7102	48.48	Cap Only	10	30	7
*9102	48.48	Cap Only	10	30	7
		With 5/8-Inch Cord Hole			
7224	$72.72	Body Only	10	30	10
7238	48.48	Cap Only	10	30	7
*9103	48.48	Cap Only	10	30	7

*Polarized.

2-Wire Cord-Grip Surface Motor Plugs

10 Amperes, 250 Volts

Composition. Steel covered, cadmium plated.

Bodies may be used with either polarized or non-polarized bases.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
		With 9/16-Inch Cord Hole			
7101	$72.72	Body Only	10	30	10
7191	36.36	Base Only	10	30	4
*9104	36.36	Base Only	10	30	4
		With 5/8-Inch Cord Hole			
7224	$72.72	Body Only	10	30	10
7191	36.36	Base Only	10	30	4
*9104	36.36	Base Only	10	30	4

*Polarized.

No. 8808

No. 7554

No. 7555

No. 7556

2-Wire Cord-Grip Flush Motor Plugs

10 Amperes, 250 Volts

Bodies may be used with polarized or non-polarized bases.

Cat. No.	Per 100	Description	Cord Hole In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7101	$72.72	Body Only	9/16	10	30	10
7224	72.72	Body Only	5/8	10	30	10
8808	60.60	Base Only	..	10	30	6
*9105	60.60	Base Only	..	10	30	6

*Polarized.

3-Wire Small Size Bakelite Connectors

10 Amperes, 250 Volts—15 Amperes, 125 Volts

Cat. No.	Per 100	Description	Cord Grip In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
		Bakelite Caps				
7554	$57.58	Cap.....	9/16	10	50	6
7558	57.58	Cap.....	5/8	10	50	6
		Bakelite Connector Bodies				
7555	$91.92	Body.....	9/16	10	50	8
7559	91.92	Body.....	5/8	10	50	8
		Bakelite Motor Plug Bases in Casings				
7556	$75.76	Base with Contact Blades...	..	10	50	5
7557	85.86	Flush Base.	..	10	50	7

Hubbell Twist-Lock Devices

3-Wire Polarized Plug Caps

No. 7311

20 Amperes, 250 Volts

Cord-grip for 23/32-inch diameter cords.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*7311	$86.66	Composition, Armored.....	10	30	12
9965	86.66	Rubber.....	10	30	8

3-Wire Porcelain Flush Receptacles

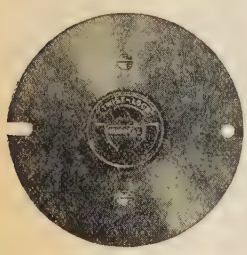
20 Amperes, 250 Volts

Supporting screw holes spaced 3 9/32 inches.

No. 7310 receptacle fits any single standard convenience outlet plate.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*7310	$126.66	10	30	15
†7502	76.36	5	10	5

†Plate for 2 outlets. Requires 3-gang outlet box.



With 4-Inch Box Covers Attached

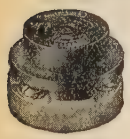
Standard finish is cadmium. Black japan may be had at no advance in price.

*For grounding information see foot note.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
7517	$139.98	5	20	12

3-Wire Porcelain Conduit Box Receptacles

20 Amperes, 250 Volts


No. 7329

Designed for permanent grounding from one contact to conduit system.

Mounting screws 5/8-inch centers. Suitable for use with Crouse-Hinds W condulets and O cover, Appleton Electric Co. W unilets with No. 5680 cover, and Adalet Mfg. Co. fittings Nos. G2H, G3H and G4H.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7329	$90.90	Receptacle....	10	30	10

3-Wire Cord Connectors

20 Amperes, 250 Volts

No. 7311

No. 7313

Composition. Cord-grips accommodate 23/32-inch diameter cords.

*For grounding information see foot note.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7311	$86.66	Cap Only....	10	30	12
7313	146.66	Body Only...	10	30	13

3-Wire Flush Motor Plugs

20 Amperes, 250 Volts

No. 7327

No. 7318

Diameter of casing flange, 2 7/8 inches.

Diameter of casing base, 2 3/32 inches.

Depth of casing, 1 19/32 inches.

Furnished with 3 mounting screw holes spaced 120 degrees apart on 1 1/4-inch radius.

*For grounding information see foot note.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7327	$84.84	Base Only in Casing....	10	30	15
7318	48.48	Base Only, Composition.....	10	30	8

*If 3 or 4-wire Twist-Lock devices are desired with ground shunt form one contact to cover or casing, suffix letter G to catalogue number.

Hubbell Twist-Lock Devices

4-Wire Polarized Plug Caps

No. 7411

20 Amperes, 250 Volts

Cord grip for 23/32-inch diameter cords.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*7411	$113.32	Composition, Armored..	10	20	12
9967	113.32	Rubber.....	10	20	9

4-Wire Porcelain Flush Receptacles

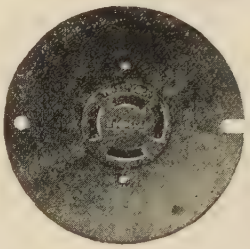
20 Amperes, 250 Volts

Supporting screw holes spaced 3 9/32 inches. *For grounding information see foot note.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7410	$163.62	Receptacle...	10	20	16
7421	25.46	Single Plate, .060" Brass	10	20	7
†7422	76.36	3-Gang Plate.	5	10	5

†Plate for 2 outlets. Requires 3-gang outlet box.

With 4-Inch Box Covers Attached



*For grounding information see foot note.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7417	$175.74	5	15	10

Standard finish is cadmium. Black japan may be had at no advance in price.

4-Wire Connectors

20 Amperes, 250 Volts

No. 7411

Composition. Cord-grips accommodate 23/32-inch diameter cords.

Diameter of base, 2 3/8 inches.

Height, 3/4-inch.

No. 7413

Holding screws are spaced 1 7/8 inches on centers for No. 6 screws.

*For grounding information see foot note.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7413	$193.92	Body Only..	10	20	14
7411	113.32	Cap Only...	10	20	12

4-Wire Flush Motor Plugs

20 Amperes, 250 Volts

No. 7415

No. 7408

Diameter of casing flange, 3 5/16 inches.

Diameter of casing base, 2 15/32 inches.

Depth of casing, 1 19/32 inches.

Furnished with 4 mounting screw holes spaced 2 29/32 inches on centers 90 degrees apart.

*For grounding information see foot note.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7408	$109.08	Base Only, in Casing	10	20	9
7415	60.60	Base Only, Composition	10	20	7

*If 3 or 4-wire Twist-Lock devices are desired with ground shunt from one contact to cover or casing, suffix letter G to catalogue number.

Hubbellock Approved Industrial Devices

For High Frequency Portable Tools

20 Amperes, 250 Volts D.C.; 30 Amperes, 600 Volts A.C.

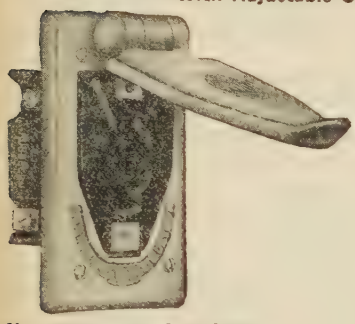
Built unusually strong to withstand the daily strain, severe service and electrical hazards incidental to the use of high frequency, high cycle portable tools.

The positive locking feature prevents accidental breaking of current, with consequent stoppage of production, and guarantees a lock-fast connection, as long as desired.

Standard finish is cadmium.

4-Wire Polarized Receptacles, Cord Connectors and Caps

With Adjustable Cord Grips



No. 20401, with Cast Iron Lift Cover Plate

No. 20403, Receptacle

No. 20415, Cap

No. 20414, Connector Body

Receptacles will fit FS and FD boxes.

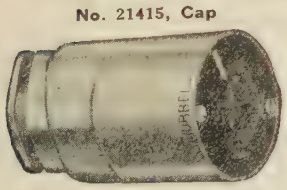
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
20401	$500.00	Receptacle with Lift Cover	2	20	27
20402	490.00	*Receptacle with Plate	2	20	18
20403	425.00	Receptacle Only	2	20	10
20414	485.00	Connector Body Only	2	20	20
20415	325.00	Cap Only	2	20	14
20416	75.00	Iron Plate with Lift Cover	2	20	17
20417	65.00	*Iron Plate	2	20	8

*Without lift cover.

4-Wire Cord Connectors

With Insulated Cord Grips

No. 21415, Cap



No. 21414, Connector Body

Exposed View Showing Rubber Insulating Cord-Grip Bushing

Hole in rubber bushing will accommodate cords from .360 to .484 inches in diameter.

Regularly equipped with ½-inch thick sponge rubber discs located within neck of steel casings and a specially designed rubber cord-grip bushing.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
21414	$485.00	4-Wire Connector Body Only	2	20	20
21415	325.00	4-Wire Cap Only	2	20	14

Hubbell Bakelite Convenience Outlets

No. 7626

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Duplex—Top Wired, Double Binding Screws

Supporting screw holes are spaced 3 9/32 inches on centers.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7625	$38.38	Narrow Ears	10	100	30
7626	38.38	Wide Ears	10	100	30

No. 9575

Duplex—Side Wired, Double Binding Screws

Supporting screw holes are spaced 3 9/32 inches on centers.

9575	$29.00	Narrow Ears	10	100	26
9595	29.00	Wide Ears	10	100	27

No. 7550

Single—Side Wired

Supporting screwholes spaced 3 9/32 inches on centers.

The face of these receptacles is ornamental and harmonizes with all types of face plates. Self-locating slots facilitate the insertion of plug caps.

7550	$22.00	Narrow Ears	10	100	21
7590	22.00	Wide Ears	10	100	21

Regularly furnished in brown bakelite, but may be had in black, at the same price.

Acorn Duplex Receptacles

No. 9990

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Duplex, Flush

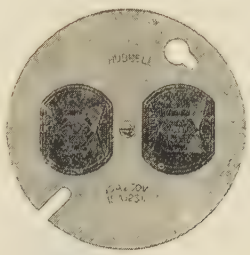
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9990	$12.64	Bakelite	10	100	15
9990-I	25.38	Ivorine	10	50	10

Duplex

With Outlet Box Covers, Bakelite

Constructed of Bakelite and equipped with cadmium plated steel covers for mounting directly to outlet boxes. Black japanned covers furnished special without extra cost.

Large binding screws, located for side wiring. Has parallel slots only.



No. 9994

With 3¼-Inch Cover

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9994	$20.00	10	50	15

With 4-Inch Cover

9995	$22.10	10	50	21

H & H Round Convenience Outlets

No. 7007

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

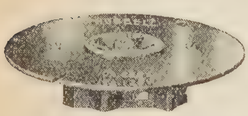
Has black japanned cover and is side wired.

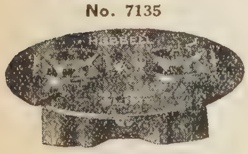
Cat. No.	Per 100	Desc.	Cover In.	Carton	Std. Pkg.	Wt., Lbs.
7006	$15.56	Single	3¼	25	100	40
7007	30.00	Single	4	5	50	25
7049	36.00	Duplex	3¼	10	50	25
7008	37.00	Duplex	4	5	50	27

Hubbell Convenience Outlets

No. 6282

No. 6283


No. 7135


No. 7260

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Round with Solid Brass Plates

Porcelain

Brush brass finish.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
With 2¾-Inch Bevel Edge Plates				
6282	$103.02	10	50	15
With 3⅝-Inch Bevel Edge Plates				
6283	$115.14	10	50	24

Bakelite Face

Standard finish of covers is cadmium plate. Black japan finish may be had on special order at no advance.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Single 3¼-In. Round Steel Covers				
7135	$29.00	10	100	40
Single 4-In. Round Steel Covers				
7136	$30.00	5	50	25
Duplex 3¼-In. Round Steel Covers				
7260	$36.00	5	50	28
Duplex 4-In. Round Steel Covers				
7137	$37.00	5	50	27

Hubbell Round Flush Receptacles

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Bakelite

Diameter of body is 1 7/16 inches. Screw holes are spaced 1¾ inches on centers, tapped for 8x32 screws.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
7331	$26.26	10	50	8

Porcelain—Polarized

Diameter of body, 1 7/16 inches. Screw holes 1⅝ inches on centers. Screw holes tapped for 8x32 screws.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
10108	$40.00	Polarized	10	30	5

Hubbell Porcelain Radio Outlet Receptacles and Plates

No. 2139

Standard finish of plates is brush brass.

Depth of receptacle base, 1 inch.

Screw hole spacings standard.

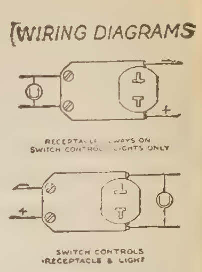
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2139	$70.70	Single	10	30	9
2145	98.98	Duplex	10	30	9

Plates for No. 2139 Single Radio Outlets

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2137	$13.14	Single Brush Brass, .040″...	10	30	10
2138	26.26	2-Gang Brush Brass, .040″..	5	15	9
2141	25.46	Single Brush Brass, .060″...	10	30	11
2142	16.16	Single Sand Blast Bakelite.	10	30	4
2143	16.16	Single Ribbed Bakelite.....	10	30	4
Plates for No. 2145 Duplex Radio Outlets					
2146	$19.80	Single Brush Brass, .040″...	10	30	10
2147	26.44	2-Gang Brush Brass, .040″..	5	15	9
2149	25.46	Single Brush Brass, .060″...	10	30	11

Hubbell Single Convenience Outlets and Switches

No. 8891



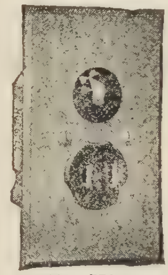
Fitting single gang boxes, these devices afford an opportunity to provide an extra convenience outlet wherever a switch is installed. Operating handles and receptacle faces are made of brown bakelite.

Ratings given below are for switches only. Receptacle rating in all cases is 10 amperes, 250 volts; 15 amperes, 125 volts.

Wiring diagrams above show method of installing to provide variation of control.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
With Single Pole Switches — 10 Amperes, 250 Volts					
8885	$175.74	With .060″ Brass Plate.....	2	10	8
8886	153.92	Without Plate.............	2	10	4
8891	175.74	With No. 8895 Plate........	2	10	8
With Double Pole Switches — 10 Amperes, 250 Volts					
8887	$175.74	With .060″ Brass Plate.....	2	10	8
8888	153.92	Without Plate.............	2	10	4
8892	175.74	With No. 8895 Plate........	2	10	8
20 Amperes, 250 Volts					
8889	$187.86	With .060″ Brass Plate.....	2	10	8
8890	166.04	Without Plate.............	2	10	4
8893	187.86	With No. 8895 Plate........	2	10	8
Separate Plates					
8894	$21.82	.060″ Brush Brass Plate....	2	10	4
8895	21.82	Sand Blast Bakelite Plate..	2	10	3

Hubbell Convenience Outlets and Pilot Lights


No. 7711

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

The combining of Convenience Outlet and Pilot Light provides an automatic signal to warn of current left on in electric irons and other appliances having heating units.

Desirable for use in kitchens, breakfast rooms, laundries, etc.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7712	$123.62	Without Plate............	2	10	12
7711	181.80	With No. 7713 Plate.......	2	10	15
7728	181.80	With No. 7729 Plate.......	2	10	13
7713	58.18	.060″ Brass Plate..........	2	10	4
7729	58.18	Ornamental Bakelite Plate..	2	10	3

Hubbell Switch and Bull's Eye Combinations

No. 7739

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

Single Pole Switch with Pilot Terminal

The warning light, which is connected in multiple with the switch circuit, shows when the current is on. Recommended for use wherever a warning light is desirable to indicate that the lights are on.

Ruby is the standard color for bull's eyes but other colors can be furnished.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7739	$282.80	With .060″ Brass Plate....	2	10	12
7759	282.80	With Ornamental Border, Bakelite Plate............	2	10	12

Hubbell Porcelain Wall Receptacles

10 Amp., 250 V.; 15 Amp., 125 V.

Concealed

Screws, $1\frac{17}{32}$-inch centers.
With double T slots.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5617	$40.00	10	50	18

Cleat

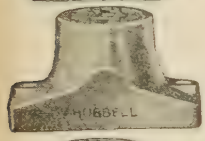
Screws, $1\frac{13}{32}$-inch centers.
With double T slots.

5618	$40.00	10	50	20

Moulding

Screws, $1\frac{1}{8}$-inch centers.
With double T slots.

5619	$40.00	10	50	18



Fielding

Screws, $2\frac{5}{16}$-inch centers.
With double T slots.

5620	$46.66	10	50	16

Conduit Box

Screws, $\frac{5}{8}$-inch centers.
With double T slots.

5624	$40.00	10	50	13

Outlet Box with Exposed Terminals

With double T slots.

7027	$40.00	10	50	16

No. 6293 Hubbell Composition Weather-Proof Receptacles

10 Amperes, 250 Volts
15 Amperes, 125 Volts

With double T slots.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6293	$84.84	10	30	10

No. 7218 Hubbell Standard Fixture Receptacle Bodies

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Interchangeable with standard brass shell socket caps and bases.
With double T slots.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7218	$33.42	10	20	3

No. 6712 Hubbell Non-Separable Attachment Plugs

Composition—Bayonet Base

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6712	$24.24	25	100	9

Hubbell Separable Attachment Plugs

No. 7000

660 Watts, 250 Volts
Pony Size—Parallel Blades
With Composition Cap

Regularly furnished in solid black composition and with nickel-plated screw shells, but may be had in solid brown composition at same price.

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
7000	$7.10	Plug, Oval Cord Hole..	$\frac{3}{8}$x$\frac{9}{32}$	25	500	58
7001	3.80	Body Only.....	.....	25	500	40
7002	3.30	Cap Only, Oval Cord Hole.....	$\frac{3}{8}$x$\frac{9}{32}$	25	500	30
7066	3.30	Cap Only, Round Cord Hole.....	$\frac{5}{16}$	25	500	30
7068	3.30	Cap Only, Round Cord Hole.....	$\frac{13}{32}$	25	500	30

Hubbell Separable Attachment Plugs

660 Watts, 250 Volts

Pony Size—With Parallel Blades
Modernistic Design—All Bakelite

This Plug consists of the No. 9010 bakelite cap, and No. 9013 bakelite base.

Brown is standard color, but black may be had on special order at no advance in price.

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
9012	$7.10	Plug, Complete.....	$\frac{3}{8}$x$\frac{9}{32}$	25	500	41
9013	3.80	Body Only.....	.....	25	500	22
9010	3.30	Cap Only.....	$\frac{3}{8}$x$\frac{9}{32}$	25	500	20

Hubbell Separable Attachment Plugs

No. 5915

660 Watts, 250 Volts
Standard Size—Parallel Blades
With Composition or Brass Covered Caps

Nickel-plated screw shells are standard.

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5915	$19.08	Plug, Complete.....	$\frac{13}{32}$	10	250	35
5917	10.50	Body Only.....	...	10	250	18
5964	8.58	Comp. Cap, Only....	$\frac{13}{32}$	10	250	20
5965	33.34	Brass Cov. Cap, Only.	$\frac{13}{32}$	10	250	24
6708	8.58	Comp. Cap, Only.....	$\frac{5}{16}$	10	250	20

Hubbell Composition Separable Attachment Plugs

No. 5467

Large Size—Tandem Blades

660 Watts, 250 Volts

With double T slots.

Nickel-plated screw shells are standard on all attachment plugs.

No. 5612

Cat. No.	Description	Cord Hole, In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
5467	Plug, Complete.....	$\frac{13}{32}$	10	100	64	$51.00
5420	Cap.....	$\frac{13}{32}$	10	100	9	17.50
5612	Plug Body.....	...	10	100	45	33.50

Hubbell Parallel Blade Plug Caps

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Composition—Pony Size

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7002	$3.30	3/8x9/32	25	500	30
7066	3.30	5/16	25	500	30
7068	3.30	13/32	25	500	30

Bakelite—Pony Modernistic Design

9010	$3.30	3/8x9/32	25	500	20

Bakelite—Pony Size—Finger Grip

9014	$4.60	5/16	10	100	6

Bakelite—Pony

Supplied in either brown or black Bakelite at same prices. Brown will be shipped unless otherwise specified.

9016	$3.30	1/4	25	500	20

Composition—Standard Size

5964	$8.58	13/32	10	250	20
6708	8.58	5/16	10	250	20

Brass Covered Composition Standard Size

Standard finish is brush brass.

5965	$33.34	13/32	10	250	23

Finger-Grip—All Rubber

9972	$10.00	13/32	25	100	8

Cord-Grip—All-Rubber

9754	$26.66	9/16	10	50	7
9756	26.66	5/8	10	50	7

Cord-Grip—Armored

Composition cap, steel covered cadmium plated. Can be supplied in brush brass finish at $5.50 per 100 extra list.

7057	$33.34	9/16	10	50	7

Cord-Grip—Armored—Angle

Composition, steel covered, cadmium. Adjustable clamp grips cord tightly, relieving strain from binding posts. Cord-grips take standard No. 14 wire.

9077	$53.32	..	10	50	9

Composition—Multiple

Provides T slots, into which may be plugged tandem or parallel blades of any other plug cap.

6772	$30.30	..	10	20	3

Composition—Series

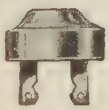
7772	$30.30	..	10	20	3

Hubbell Tandem Blade Plug Caps

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Composition—Heavy Duty

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5420	$17.50	13/32	10	100	8



Brass Covered Porcelain—Heavy Duty

Standard finish is brush brass.

5421	$33.34	13/32	10	100	11

Finger-Grip—Rubber

9974	$17.50	13/32	25	100	8

Composition—Steel Covered Finger-Grip

Has one-inch extensions to facilitate insertion and removal from the receptacle. Curved lip prevents undue wear on the cord at the point where it enters the cap.

10057	$46.66	13/32	10	50	10

Brass Covered Composition —Heavy Duty With 3/8-Inch Threaded Nipple

Standard finish is brush brass.

6606	$53.32	13/32	10	100	14

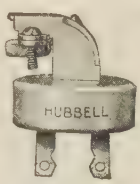
Cord-Grip—All-Rubber

9752	$26.66	9/16	10	50	7
9753	26.66	5/8	10	50	7

Cord-Grip—Armored

Composition cap, steel covered cadmium plated. Can be supplied in brush brass finish at $5.50 per 100 extra.

7056	$33.34	9/16	10	50	7
7183	33.34	5/8	10	50	8



Cord-Grip—Armored—Angle

Composition, steel covered, cadmium. Adjustable clamp grips cord tightly, relieving strain from binding posts. Cord-grips take standard No. 14 wire.

9076	$53.32	..	10	50	9

Composition—Multiple

Provides T slots, into which may be plugged tandem or parallel blades of any other plug cap.

6771	$33.34	..	10	20	3

Hubbell Polarized Plug Caps

Standard Size Parallel Blades

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*6764	$8.58	13/32	10	250	20

*Polarized—one wide and one narrow blade.

Finger Grip—Parallel Blades

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

9973	$11.50	13/32	25	100	8

Cord-Grip—All Rubber Parallel Blades

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

9755	$26.66	9/16	10	50	7
9757	26.66	5/8	10	50	7

Cord-Grip—Armored Parallel Blades

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Composition cap, steel covered cadmium plated. Can be supplied in brush brass finish at $5.50 per 100 extra.

Polarization is effected by one wide and one narrow blade.

7059	$33.34	9/16	10	50	6
7185	33.34	5/8	10	50	8

Cord-Grip—Rubber

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

9970	$60.00	19/64 to 9/16	10	30	5
9971	60.00	5/8	10	30	5

20 Amperes, 250 Volts

9758	66.66	5/8	10	30	6

Cord-Grip

Composition cap, steel covered, cadmium plated.

The adjustable clamp grips the cord tightly, thus relieving the strain from the binding posts, and also prevents the outer cover of cord from unraveling.

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

7092	$60.00	19/64 to 9/16	10	30	6
7241	60.00	5/8	10	30	6

29 Amperes, 250 Volts

7058	66.66	5/8	10	30	8

Cord-Grip—All Rubber Double T Blades

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

9760	$46.66	9/16	10	50	7
9762	46.66	5/8	10	50	7

Cord-Grip—Armored Double T Blades

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Blades are a combination of tandem and parallel rived and key-locked to form a girder-like unit of unusual strength. Fits all double T slot receptacles. Steel covered, cadmium plated.

7286	$53.32	9/16	10	30	5

Hubbell 2-Wire Cord Connectors

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Standard Size with Tandem Slots

With Brass Covered Strain Relief Caps

For 2-conductor cords, Nos. 16 and 18 standard, No. 18 Super Service and No. 18PS Duracord.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6095	$106.66	Body Only...	10	50	12
5700	73.32	Cap Only....	10	50	10

Small Size with Parallel Slots Composition

Measures but 1 5/8 inches overall.

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
*6180	$21.58	Plug Complete.	13/32	10	50	7
6630	13.00	Polarized Body Only.....	13/32	10	50	5
*6181	8.58	Cap Only.....	13/32	10	50	3
9181	8.58	Polarized Cap Only.....	13/32	10	50	3

*Non-polarized.

Polarized by providing a cap with one wide and one narrow blade which fits corresponding slots in body.

No. 6630 Bodies may be used with either polarized or non-polarized caps.

Standard Size with Parallel Slots Composition

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
6116	$21.58	Plug Complete..	13/32	10	50	12
6118	13.00	Body Only.....	13/32	10	50	8
5964	8.58	Cap Only.....	13/32	10	250	20

Heavy Duty Size with Double T Slots

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
5518	$53.86	Plug Complete..	13/32	10	50	13
5574	36.36	Body Only.....	13/32	10	50	8
7080	36.36	Body Only.....	5/16	10	50	8
5420	17.50	Cap Only.....	13/32	10	100	8

Heavy Duty Size with Double T Slots Cord-Grip

Composition. Caps are steel covered, cadmium plated.

Cat. No.	Per 100	Description	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7084	$60.00	Body Only.....	9/16	10	50	11
7056	33.34	Cap Only.....	9/16	10	50	7
7187	60.00	Body Only.....	5/8	10	50	11
7183	33.34	Cap Only.....	5/8	10	50	7

Hubbell Polarized 2-Wire Cord Connectors

No. 6821

Standard Size

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6821	$49.44	Plug Complete.	13/32	10	50	10
6822	40.00	Body Only.....	13/32	10	50	8
6918	9.46	Cap Only......	13/32	10	50	5

Nos. 6278, 5567

Large Size—Brass Covered Porcelain Cap

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6278	$73.32	Body Only.....	13/32	10	30	9
5567	66.66	Cap Only......	13/32	10	30	6

Large Size—Brass Covered Composition Cap

20 Amperes, 250 Volts

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6717	$93.32	Body Only.....	1/2	10	30	10
6156	66.66	Cap Only......	1/2	10	30	5

Hubbell 2-Wire Surface Motor Attachment Plugs

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Nos. 7021-6630

Composition

No. 7021 is furnished with one wide and one narrow blade to effect polarization.

Cord hole size of No. 6630 body, 13/32-inch. No. 6630 body may be used with polarized or non-polarized bases.

Nos. 6118-6823

Small Size with Parallel Slots

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7021	$13.34	Pol. Base Only.	13/32	10	50	3
7024	13.34	Base Only, Non-Pol.....	13/32	10	50	3
6630	13.00	Body Only.....	13/32	10	50	5

Nos. 5574-5896

Standard Size with Parallel Slots

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6118	$13.00	Body Only.....	13/32	10	50	8
6823	15.76	Base Only.....	...	10	50	4

Heavy Duty—Double T Slots

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5574	$36.36	Body Only.....	13/32	10	50	8
7080	36.36	Body Only.....	5/16	10	50	8
5896	17.34	Base Only.....	13/32	10	50	4

Nos. 6822-7918

Standard Size—Polarized

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6822	$40.00	Body Only.....	..	10	50	8
7918	17.34	Base Only.....	..	10	50	6

Interchanges only with No. 6822 connector and No. 7330 motor plug.

Hubbell Motor Attachment Plugs

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Nos. 6630 and 6631

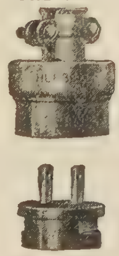
Small Size

Composition.

Measurement assembled is 1 5/8 inches in length and 1 1/32 inches in diameter at bottom of base.

Portion with contact blades is arranged with holding grooves for fitting into the apparatus.

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6630	$13.00	Body Only	13/32	10	50	5
6979	13.00	Body Only	5/16	10	50	5
6631	14.66	Base Only	....	10	50	3



Nos. 7257 and 6631

With Cord-Grips

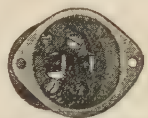
Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7257	$55.56	Body Only	5/8	10	50	8
7259	55.56	Body Only	19/64	10	50	8
6631	14.66	Base Only	...	10	50	3

Nos. 7257 and 7259 bodies may also be used with catalogue No. 6808 motor plug base.

Hubbell Flush Motor Plugs

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Small Size—Parallel Blades



No. 6808 or 9808

Base is composition with metal casing. Composition body. Supporting screw holes are spaced 1 3/4 inches on centers. Diameter of brass shell, 1 3/8 inches.

No. 6630

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Non-Polarized						
6808	$36.36	Base Only, in Casing	13/32	10	50	7
6630	13.00	Body Only	13/32	10	50	5
Polarized, One Wide, One Narrow Blade						
9808	$36.36	Base Only, in Casing	13/32	10	50	7
6630	13.00	Body Only	13/32	10	50	5

Small Size—Parallel Blades—Cord-Grip Polarized

Nos. 7257-9808

Base is composition in metal casing. Body is composition, steel covered.

Supporting screw holes, 1 3/4 inches on centers. Diameter of shell, 1 3/8 inches.

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7257	$55.56	Body Only	5/8	10	50	8
7259	55.56	Body Only	19/64	10	50	8
9808	36.36	Base Only, in Casing	13/32	10	50	7

Standard Size, Tandem Blades Heavy Duty

Nos. 5574-4896

Base is composition with metal casing. Composition body.

Supporting screw holes of base are spaced 2 1/16 inches on centers for No. 8 screws. Diameter of brass shell, 1 5/8 inches.

Cat. No.	Per 100	Description	Cord Hole Inches	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4896	$46.66	Base Only	13/32	10	50	10
5574	36.36	Body Only	13/32	10	50	8
7080	36.36	Body Only	5/16	10	50	8

Standard Size—Polarized

No. 7330

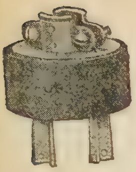
Supporting screw holes spaced 2 1/16 inches on centers for No. 8 screws. Diameter of brass shell is 1 5/8 inches.

Polarized blades are arranged to take No. 6822 Body.

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7330	$46.66	Base Only in Casing	10	50	10

Hubbell Double T Blade Plug Caps

10 Amperes, 250 Volts; 15 Amperes, 125 Volts



No. 9759

Cord-Grip—All-Rubber

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9759	$46.66	9/16	10	50	7
9761	46.66	5/8	10	50	7

Cord-Grip—Armored

No. 7162

Blades are a combination of tandem and parallel riveted and key-locked to form a girder-like unit of unusual strength. Fits all double T slot receptacles.

Steel covered, cadmium-plated.

7162	$53.32	9/16	10	30	5

Hubbell 2 to 3-Wire Composition Plug Adapters

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

No. 7052

These adapters have two blades for insertion in any standard convenience outlet while other end is equipped with three slots to take standard 10-ampere 3-wire caps as listed in opposite column.

No. 9052-L

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7052	$53.32	Tandem Blades..	10	30	6
9052	53.32	Parallel Blades..	10	30	6
7052-L	58.00	Tandem Blades with Ground Wire..........	10	30	7
9052-L	58.00	Parallel Blades with Ground Wire..........	10	30	7

Hubbell Polarized Porcelain Flush Receptacles

With 3¼ and 4-Inch Round Steel Box Covers Attached

*These receptacles will readily fit 3¼-inch outlet boxes when only one box connector is used. When two or more box connectors are needed the receptacles with 4-inch covers are required.

Cadmium finish outlet box covers are standard. Black japan covers can be furnished on special order at no advance in price.

No. 7270

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
		10 Amperes, 250 Volts; 15 Amperes, 125 Volts			
*7270	$60.00	No. 5566 Porcelain Receptacle with 3¼-Inch Cover...........	10	30	18
7271	66.66	No. 5566 Porcelain Receptacle with 4-Inch Cover.............	5	30	20
		20 Amperes, 250 Volts			
*7272	$106.66	No. 5552 Porcelain Receptacle with 3¼-Inch Cover...........	10	30	18
7273	113.32	No. 5552 Porcelain Receptacle with 4-Inch Cover.............	5	30	20

GraybaR QUALITY Since 1869
Distributed and guaranteed by
GraybaR ELECTRIC COMPANY

Hubbell Polarized Caps

No. 5567

No. 6730

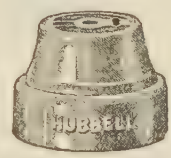
No. 5553, 6156

No. 6720

Standard finish on brass-covered caps is brush brass.

Cat. No.	Description	Cord Hole, In.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
	10 Amperes, 250 Volts; 15 Amperes, 125 Volts					
5567	Porcelain, Brass Covered..	13/32	10	30	5	$66.66
6730	Composition..............	13/32	10	30	4	33.34
	20 Amperes, 250 Volts					
5553	Porcelain, Brass Covered..	½	10	30	6	$66.66
6156	Comp. Brass Covered.....	½	10	30	5	66.66
6720	Composition..............	½	10	30	4	40.00

Hubbell Polarized Porcelain Wall Receptacles



Nos. 5885 or 5621

Concealed Base

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Screw holes spaced 1 17/32 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt.,Lbs. Std. Pkg.
5885	$53.32	10	30	11

20 Amperes, 250 Volts

Screw holes spaced 1 7/16 inches.

5621	$66.66	10	30	14

Nos. 5886 or 5622

Cleat Base

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

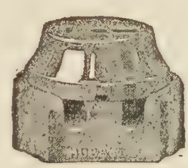
Screw holes spaced 1 13/32 inches.

5886	$53.32	10	30	14

20 Amperes, 250 Volts

Screw holes spaced 1 25/32 inches.

5622	$66.66	10	30	18



Nos. 5887 or 5623

Moulding Base

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Screw holes spaced 1⅛ inches.

5887	$60.00	10	30	12

20 Amperes, 250 Volts

Screw holes spaced 1½ inches.

5623	$73.32	10	30	17

No. 5757

Conduit Box Base

20 Amperes, 250 Volts

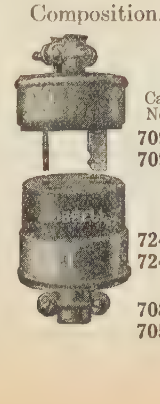
Screw holes spaced ⅝-inch.

5757	$66.66	10	30	13

Hubbell 2-Wire Cord Connectors

Polarized, Cord-Grip

Composition. Caps are steel covered, cadmium plated.



Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
		With 9/16-Inch Cord Hole — 10 Amp., 250 Volts; 15 Amp., 125 Volts			
7091	$86.66	Body Only....	10	30	8
7092	60.00	Cap Only.....	10	30	6
		With ⅝-Inch Cord Hole — 10 Amp., 250 Volts; 15 Amp., 125 Volts			
7240	$86.66	Body Only....	10	30	8
7241	60.00	Cap Only.....	10	30	6
		20 Amp., 250 Volts			
7086	$100.00	Body Only....	10	30	10
7058	66.66	Cap Only.....	10	30	8

Hubbell Polarized Porcelain Flush Receptacles

Will fit standard single convenience outlet plates.

Supporting screw holes spaced 3 9/32 inches.

10 Amperes, 250 Volts
15 Amperes, 125 Volts

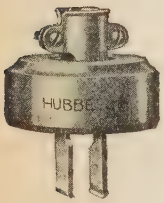
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5566	$53.32	Black Porcelain	10	30	12

20 Amperes, 250 Volts

5552	100.00	Black Porcelain	10	30	12

Single Gang Size

30 Amperes, 250 Volts



No. 7436

No. 7437

No. 7438

No. 7438 receptacle is 2½ inches high by 1 21/32 inches wide by 1⅞ inches deep, permitting its being installed in a single gang box. The face diameter of No. 7438 is larger than standard and requires the special plate No. 7439. The outside diameter of the cap is such that it will not fit when used in a two-gang installation of 7438 receptacles.

These devices are comparable to Cat. Nos. 7070, 7071, 7072, but are not interchangeable with them. Polarization is effected by means of one wide and one narrow blade and corresponding lots.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7436	$150.00	Cord Grip Cap, 21/32-Inch Cord Hole	5	30	14
7437	70.00	Composition Cap, 21/32-Inch Cord Hole	5	30	12
7438	132.20	Composition Face Porcelain Receptacle	10	30	16
7439	21.78	.040-Inch Brush Brass Plate for No. 7438	10	30	6

Two-Gang Size

30 Amperes, 250 Volts

Polarized

This receptacle is made throughout of a special black porcelain. Supporting lugs have mounting holes spaced to fit standard 2-gang outlet boxes 2 inches deep or over.

No. 7127 cap is black composition, steel covered with adjustable cord grip. Binding screws are extra large and protected by an insulating disc which fits over the blades, completely closing in the wiring terminals. Contact blades are of heavy gauge copper.

No. 7072 plate is made of .060-inch brass of standard 2-gang size, 4½x4 9/16 inches. Standard finish is brush brass.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7070	$299.98	Black Porcelain Receptacle	1	5	8
7071	146.66	Black Porcelain Cap, 23/32-Inch Cord Hole	1	5	3
*7127	179.98	Metal Covered Cord Grip Cap	1	5	4
7072	108.88	.060″ Brass Plate	1	5	2
†7116	124.44	.100″ Brass Plate, 5½ Inches Square	1	5	3

*Cord hole size, ⅝ to 1 inch.

†Extra large plate for covering irregularities in plaster.

Hubbell 3-Wire Polarized Receptacles

Single, Top Wired

No. 6051 regularly furnished in black composition.

No. 7189 same design as No. 6051, but has ground shunt from one terminal to the back supporting strap.

No. 9051 can be supplied grounded by suffixing letter G to catalogue number.

No. 6051

Composition

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6051	$113.32	10	50	25
7189	113.32	10	50	25

Porcelain

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

9051	$113.32	10	50	25

No. 6810

Porcelain

20 Amperes, 250 Volts

Will fit standard single convenience outlet plates. Supporting screw holes spaced 3 9/32 inches on centers.

If desired grounded suffix letter G to catalogue number.

6810	$126.66	10	30	15

No. 7051

Duplex, Side Wired

Brown composition is standard but black composition will be supplied on special order at the same price. Supporting screw holes are spaced 3 9/32 inches. No. 7051 takes standard duplex receptacle flush plates. When desired with ground shunt to bridge suffix letter G to catalogue number.

10 Amperes, 250 Volts
15 Amperes, 125 Volts

7051	$166.66	10	30	11

With 4-Inch Round Steel Box Cover

Cadmium finished covers are standard. Black japanned furnished at same price. Brown composition standard. Black furnished on special order at same price.

When desired with ground shunt suffix letter G to catalogue number.

No. 7208

10 Amperes, 250 Volts
15 Amperes, 125 Volts

Single

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7275	$126.66	5	50	30

Duplex

7208	$175.54	5	30	17

20 Amperes, 250 Volts

Single

7277	$139.98	5	30	24

Hubbell 3-Wire Polarized Plug Caps

Composition

Nos. 6149, 7252

10 Amperes, 250 Volts

15 Amperes, 125 Volts

No. 7198

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6149	$33.34	7/16	10	50	6
7252	33.34	1/4	10	50	6
		20 Amperes, 250 Volts			
7198	$53.32	5/8	10	30	6

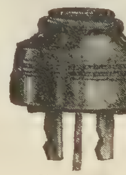
Brass Covered

No. 6150

10 Amperes, 250 Volts

15 Amperes, 125 Volts

Brush brass is standard finish for No. 6058.

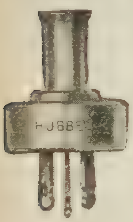


No. 6058

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
		Composition			
6150	$46.66	7/16	10	50	7
		Porcelain 20 Amperes, 250 Volts			
6058	$80.00	1/2	10	30	6

If desired grounded suffix letter G to catalogue number.

Finger-Grip

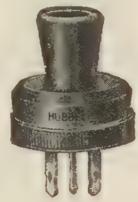


No. 10056

10 Amperes, 250 Volts

15 Amperes, 125 Volts

Metal Covered Finger Grip Cap has 1 inch extension to facilitate insertion and removal from the receptacle. Cadmium finish.



No. 9975

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
		Metal Covered			
10056	$66.66	13/32	10	50	10

If desired grounded suffix letter G to catalogue number.

		Rubber			
9975	$33.34	7/16	10	50	9

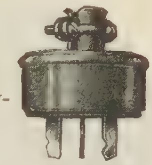
Cord-Grip

No. 7055

10 Amperes, 250 Volts

15 Amperes, 125 Volts

Composition cap, steel covered, cadmium plated.



No. 7089

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7055	$60.00	9/16	10	50	7
7309	60.00	5/8	10	50	7
		20 Amperes, 250 Volts			
7089	$86.66	5/8	10	20	6

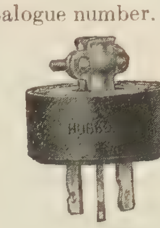
If desired grounded suffix letter G to catalogue number.

Cord-Grip—Rubber

No. 9750

10 Amperes, 250 Volts

15 Amperes, 125 Volts



No. 9977

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9750	$53.32	9/16	10	50	8
9751	53.32	5/8	10	50	8
		20 Amperes, 250 Volts			
9977	$80.00	5/8	10	20	5

If desired grounded suffix letter G to catalogue number.

Hubbell 3-Wire Polarized Wall Receptacles

No. 6059

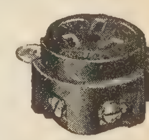
Screw holes 1¾ inches on centers. Outside diameter of base, 2½ inches.

10 Amp., 250 Volts; 15 Amp., 125 Volts

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6047	$66.66	Concealed	10	50	24
		20 Amperes, 250 Volts			
6059	$86.66	Concealed	10	30	16

Hubbell 3-Wire Polarized Composition Round Flush Receptacles

10 Amperes, 250 Volts; 15 Amperes, 125 Volts



No. 7214

Screw holes in mounting straps, 1¾ inches on centers, tapped for 8x32 screw holes. A round hole 1½ inches in diameter is necessary to accommodate the receptacles.

No. 7214 is equipped with two binding screws only, the third terminal being grounded direct to the back of the mounting strap by a metal shunt.

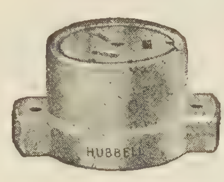
No. 7215 is equipped in the usual way with three binding screws for regular three-wire work, and is not grounded to the mounting strap.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7214	$86.66	Grounded..............	10	30	5
7215	86.66	Not Grounded...........	10	30	7

Hubbell 3-Wire Polarized Surface Receptacles

Porcelain

50 Amperes, 125 Volts
40 Amperes, 250 Volts



No. 9306

This receptacle is of the concealed type and fits General Electric SP72C102 cover for SP72151 or SP72171, 4 11/16-inch outlet box with ½, ¾, 1, and 1¼ inch knockouts. No. 7513 cap and Nos. 9304 and 9305 caps with ground contacts removed may be used with this receptacle; may also be utilized as a 30-ampere receptacle by the use of No. 7113 cap. Mounting screw holes spaced 2⅞ inches on centers.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9306	$98.98	5	25	30

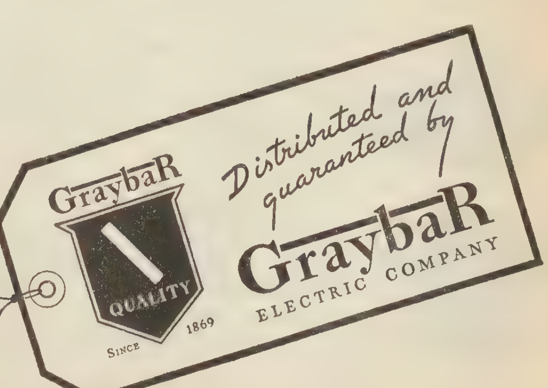
Composition

30 Amperes, 250 Volts

No. 9307

This receptacle is similar to No. 9306 except that it is composition. Nos. 7113, 7513, 9304 and 9305 caps may be used with this receptacle. It is necessary to remove the ground contacts from Nos. 9304 and 9305.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9307	$155.54	5	25	20



Hubbell 3-Wire Polarized Cord Connectors

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Composition.

Cat. No.	Per 100	Description	Size Cord Hole In.	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
6409	$66.66	Body Only.....	7/16	10	50	11
6149	33.34	Cap Only.....	7/16	10	50	6
7252	33.34	Cap Only.....	1/4	10	50	6

Hubbell 3-Wire Polarized Cord Connectors

Cord-Grip

No. 7055-7082

Composition. Caps are steel covered, cadmium plated.

9/16-Inch Cord Hole

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
7082	$93.32	Body Only.....	10	50	12
7055	60.00	Cap Only.....	10	50	7

5/8-Inch Cord Hole

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

7308	$93.32	Body Only.....	10	50	12
7309	60.00	Cap Only.....	10	50	8

20 Amperes, 250 Volts

7088	$146.66	Body Only.....	10	20	8
7089	86.66	Cap Only.....	10	20	6

Hubbell 3-Wire Polarized Surface Type Motor Plugs

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

No. 6409

Composition. Diameter of base, 1 19/32 inches.

Body Only

Cat. No.	Per 100	Cord Hole Inches	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
6409	$66.66	7/16	10	50	11

No. 7082

Cord-Grip Body Only

7082	$93.32	9/16	10	50	12

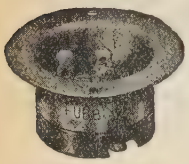
If desired grounded, suffix letter G to catalogue number.

No. 7810

Surface Base Only

7810	$33.34	..	10	50	9

Mounting screw holes spaced 1 7/8 inches on centers.



No. 7808

Flush Base Only

7808	$73.32	..	10	50	7

If desired grounded, suffix letter G to catalogue number.

Mounting screw holes spaced 2 1/8 inches on centers. Diameter of base, 1 11/16 inches.

Nos. 7810 and 7808 take connector bodies Nos. 6409 and 7082 listed above.

Hubbell 4-Wire Polarized Cord-Grip Cord Connectors

20 Amperes, 250 Volts

The Cord-Grip accommodates 23/32-inch diameter cords.

Suffix letter G to Catalogue Number 7351 when desired with ground shunt to metal cover from ground contact.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7351	$179.98	Body Only	10	20	10
7251	113.32	Cap Only..	10	20	6
9251	125.32	Grounded Cap Only	10	20	6

Hubbell 4-Wire Polarized Receptacles and Caps

Flush—Composition

20 Amperes, 250 Volts

No. 7250

Standard single convenience outlet plates are used on the No. 7250 receptacle.

Gang plates to accommodate this receptacle must be of special size. Submit specifications for recommendation.

If No. 7250 is desired grounded suffix letter G to catalogue number.

No. 7251

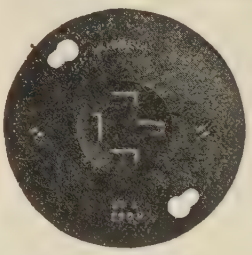
No. 7251 is a straight 4-wire cap.

No. 9251 has a shunt from the ground blade to the metal cover for grounding to metal sheathed 3-wire cable.

The cord-grip will accommodate 23/32 inch diameter cord.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7250	$146.66	Receptacle.....	10	20	8
7251	113.32	Cap.....	10	20	6
9251	125.32	Grounded Cap.....	10	20	6

With 4-Inch Steel Box Covers



Cadmium finish outlet box covers are standard.

Black japanned covers can be furnished on special order at no advance in price.

If desired grounded suffix letter G to catalogue number.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7279	$159.98	5	20	13

Hubbell 3-Wire Polarized Cord Connectors

Cord-Grip

30 Amperes, 250 Volts

Composition. The cap is steel covered, cadmium plated.

The adjustable Cord-Grip accommodates cords from 5/8 to 1 inch in diameter.

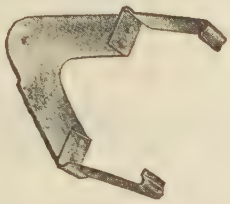
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std.Pkg.
7283	$363.60	Body Only.....	1	5	7
7113	151.50	Cap Only.....	1	5	5

Hubbell 3-Wire Range Receptacle Rubber Cord Sets and Fittings

50 Amperes, 125 Volts; 40 Amperes, 250 Volts

No. 7910

Nos. 7911-7912



No. 7913

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7910	$181.80	Surface Receptacle	2	10	15
7911	60.60	Coupling for 3 No. 8 Wires	2	10	4
7912	70.70	Coupling for 3 No. 6 Wires	2	10	4
7913	40.40	Ground Strap for No. 7910	2	10	2

Nos. 7914, 7915, 7916

7914	323.20	38-Inch Rubber Cord Set, 2 No. 6 and 1 No. 8 Wires.	2	10	15
*7915	272.70	38-Inch Rubber Cord Set, 2 No. 8 and 1 No. 10 Wires	2	10	15
7916	383.80	38-Inch Rubber Cord Set, 3 No. 6 Wires	2	10	15

*Rated 35 amperes, 125 or 250 volts.

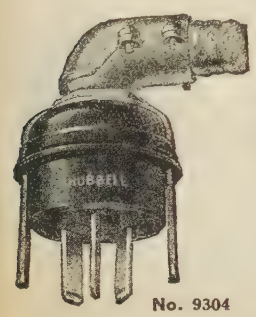
No. 7910 receptacle has an opening for ¾-inch conduit and a knockout for 1-inch conduit.

No. 7913 ground strap is used on No. 7910 with metallic systems when a separate ground is provided.

Nos. 7911 and 7912 couplings hold and protect non-metallic cable where cable passes through floor.

Hubbell Polarized 3-Wire Composition Caps

With Grounding Clips—Heavy Duty



No. 9304

50 Amperes, 125 Volts

40 Amperes, 250 Volts

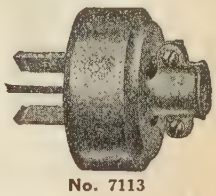
This cap is equipped with cord grips to accommodate BX cables, cords, or flexible conduit having outside diameters from .950 to 1.125 inches inclusive.

May be used with Nos. 7112, 9306 and 9307 receptacles, and No. 7910 range receptacle.

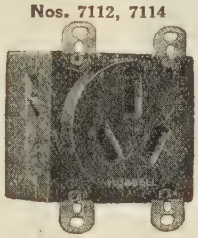
Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9304	$212.10	Angle Cap	1	10	17
9305	197.96	Straight Cap	1	10	15

Hubbell 3-Wire Polarized Porcelain Flush Receptacles

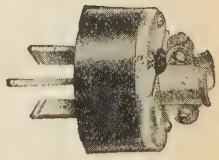
Nos. 7112, 7114



No. 7113



No. 7512



No. 7513

This receptacle is of rugged construction, made throughout of a special black porcelain.

The supporting lugs have mounting holes spaced to fit a standard 2-gang box 2 inches deep or over as listed below.

No. 7113 is composition, steel covered, cadmium-plated with adjustable cord-grip accommodating cords up to 29/32-inch in diameter. No. 7513 is similar to 7113 except that it is not completely covered and has soldering lugs instead of binding screws.

If desired grounded, suffix letter G to catalogue number.

With Binding Screws

30 Amperes, 250 Volts

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7112	$436.32	Porcelain Receptacle	1	5	8
7113	151.50	Cord-Grip Cap	1	5	4
7514	151.50	Grounded Cord-Grip Cap.	1	5	4
*7114	98.98	.060″ Brass Plate	1	5	2
†7115	113.12	.100″ Solid Brass Plate	1	5	3

With Soldering Terminals

60 Amperes, 250 Volts

7512	$505.00	Porcelain Receptacle	1	5	8
7513	181.80	Cord-Grip Cap	1	5	4
*7114	98.98	.060″ Brass Plate	1	5	2
†7115	113.12	.100″ Solid Brass Plate	1	5	3

*No. 7114 is of standard 2-gang size, 4½x4⅝ inch. Standard finish, brush brass. The advance for special finish is figured as a 2-gang plate.

†The plate No. 7115 is 5½ inches square to allow an overhang over the box to cover up irregularities in plaster work.

Suitable Fittings for Receptacles Nos. 7112, and 7512

Crouse-Hinds Co. —2-gang FS series Condulets. Covers for use with 7070 on these condulets are S-612—surface type. SS-612—flush type. Covers for use with 7112 or 7512 on these condulets are S-622—surface type and SS-622—flush type.

National Metal Mldg. Co. —24K, 24KK and 24KL Covers on 2400, 2401, 2402, 2403, 2404, 2405 and 2410 Boxes. 25K Cover on 2500, 2501, 2514, 2515 and 2590 Boxes. 30C2 Cover on 3002 and 3012 Boxes. 4230 and 4231 Boxes.

Steel City Elec. Co. —2GC Cover on 2G Box and Cat. Nos. 52C17, 52C18, 52C19 on 51151 and 52151 Boxes, and 72C18 Cover on 72171 Box.

Thomas & Betts—32 (Box and Cover Complete).

Hubbell 3-Wire Porcelain Flush Receptacles

With Plaster Box Covers, Polarized

60 Amperes, 125 Volts; 40 Amperes, 250 Volts

Fits standard boxes 4$\frac{11}{16}$ in. square and 2⅛ in. deep. The plaster box cover is of special construction to make possible the use of this receptacle with standard boxes.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9301	$509.04	1	10	18

Brass Plates for No. 9301 Flush Receptacle

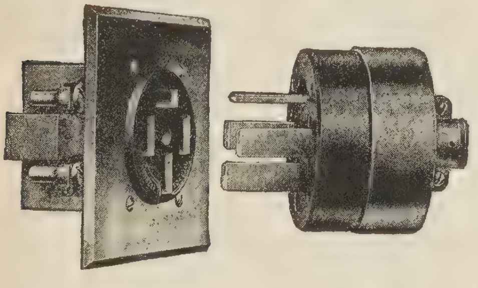
Standard finish on plates is brush brass.

These plates are 5½ inches square to allow an over-hang over the box to cover up irregularities in plaster work.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9302	$113.32	No Contact Slots or Springs...	1	10	5
9303	141.40	With Ground Contact Slots and Springs....	1	10	7
9309	70.70	.060″ Cadmium-Plated Steel Plate with Ground Contact Slots and Springs..........	2	10	5

Hubbell 4-Wire Polarized Porcelain Flush Receptacles

60 Amperes, 250 Volts



Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7301	$606.00	Receptacle.........	1	5	10
7302	333.30	Angle Cap.........	1	5	9
7303	303.00	Straight Cap.......	1	5	8
*7114	98.98	.060″ Brass Plate..	1	5	2
†7115	113.12	.100″ Solid Brass Plate............	1	5	3

*The plate No. 7114 is .060 inch brass, size 4½x4$\frac{9}{16}$ inches.

†The plate No. 7115 is 5½ inches square to allow an overhang over the box to cover up irregularities in plaster work. Standard finishes are brush brass.

Soldering lugs on Nos. 7301, 7302, and 7303 accommodate No. 4 wires. Nos. 7302 and 7303 caps are steel covered, cadmium-plated, with cord grips accommodating cords up to 1¼ inches in diameter. If desired grounded, suffix letter G to catalogue number.

Caps are steel covered, cadmium-plated, with cord grips accommodating cords up to 1¼ inches in diameter.

Fittings Suitable for Use with No. 7301 Receptacle

Adalet Mfg. Co.—HHE-605 combination box and cover, dead end or E type. HHC-605 combination box and cover, straight through or C type.

Crouse-Hinds Co.—FSC-32 condulet body with EXF-12 extension. S-622 surface type cover and SS-622 flush type cover.

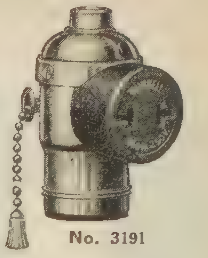
Steel City Electric Co.—0221 box with 0231 concealed cover and 0232 surface type cover.

Hubbell Pull Socket Te-Taps

Plug Outlet—660 Watts, 250 Volts

Socket Outlet—250 Watts, 250 Volts

No. 3190



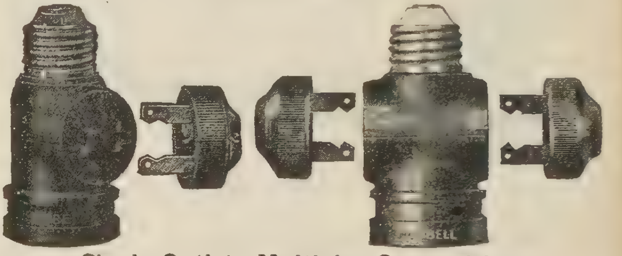
No. 3191

Standard finish is brush brass, and will be furnished on all orders unless otherwise specified.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
		With Screw Base			
3190	$133.00	With Medium Screw Base..	2	10	5
		With Standard Socket Caps			
3191	$101.80	With ⅛-Inch Cap..........	2	10	4
3193	109.44	With ⅜-Inch Cap..........	2	10	4
3194	101.80	With Pendant Cap.........	2	10	4

Hubbell Current Taps

660 Watts, 250 Volts



Single Outlet—Multiple—Composition

No. 6338 No. 6710

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6338	$78.10	With Composition Cap.....	10	50	24
6339	60.60	Less Cap.................	10	50	17
		Double Outlet—Multiple—Composition			
6710	$107.72	With 2 No. 5420 Comp. Caps	10	20	11
6711	72.72	Less Caps................	10	20	8

Series—Porcelain

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6298	$60.60	10	50	20

Acorn Current Taps

Bakelite

No. 463

No. 464

No. 465

Cat. No.	Per 100	Description	Rating	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
463	$7.36	Cube, with Contact Blades....	15A.-250V. / 10A.-125V.	25	100	10
464	13.00	2-Way Socket...	660W.-250V.	25	100	13
465	13.00	Double Current.	660W.-250V.	25	100	13

No. 35024 Hubbell Pull Sockets with Lamp Base Attachment

250 Watts, 250 Volts

Can be attached to any ordinary socket or receptacle. Equipped with 6½-inch pull chain.

Standard finish is brush brass.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
35024	$70.00	2	10	4

No. 6900 Hubbell Triplex Table Taps

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Combines 3 double T-slot outlets, arranged in multiple, with a connector plug. May be fastened to the underside of table or to wall surface by screws through holes at either end, or may be used portably on table or desk.

Furnished complete with cord connector body, attachment plug cap, and 8 feet of black cord.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
6900	$323.20	1	5	11

Hubbell Composition Twin Te-Taps

10 Amperes, 250 Volts; 15 Amperes, 125 Volts

Can be used with all convenience outlets excepting those having lift cover plates.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7010	$60.60	Tandem Blades	2	10	4
7035	60.60	Parallel Blades	2	10	4

Hubbell Edison Base Adapters

No. 5897

660 Watts, 250 Volts

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
5897	$40.00	Composition	10	50	8
5424	26.66	Porcelain	10	50	8

Hubbell Adapters for Polarized Plug Receptacles

660 Watts, 250 Volts

No. 6981

No. 6981 is designed for use with 10-ampere polarized wall and flush receptacles.

No. 5898 is designed for use with 20-ampere polarized wall and flush receptacles.

No. 5898

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
6981	$46.66	Composition	10	30	6
5898	46.66	Porcelain	10	30	6

No. 427

Hubbell Porcelain Pilot Lamp Receptacles

The lamps on Nos. 427 and 428 lie normally in a horizontal position but through a hinge arrangement allow a lamp to be readily replaced. Type T-7 clear, candelabra base, 2 c.p., 125-volt lamp furnished with No. 427 and 4 c.p., 250-volt furnished with No. 428.

Nos. 427 and 428 cannot be used with screwless plates.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
427	$98.98	Receptacle with 2 C.P. 125-Volt Lamp	10	30	12
429	49.50	Lamp for No. 427	10	30	3
428	190.90	Receptacle with 4 C.P. 250-Volt Lamp	10	30	12
430	141.40	Lamp for No. 428	10	30	3

Hubbell Bull's Eye Jewels and Bull's Eyes

Round Bull's Eye Jewels

This is a convex ruby jewel mounted in a brass ring with attaching lugs, for fastening to the center of any standard single convenience outlet plate for use in conjunction with pilot light receptacle.

Ruby glass and brass rings furnished unless otherwise specified. For special finishes on rings, except silver and gold, add $2.00 per 100.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
736	$35.36	10	30	2

Detachable Bull's Eyes

For Rectangular Hole Toggle Switch Plates

Brass ring has projecting prongs which can be bent over in back of plate. Brass ring will be furnished in any finish without extra charge.

Ruby glass and brass rings are standard. Clear, green, blue, amber and other colors furnished upon special order at same price.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt.,Lbs. Std. Pkg.
7298	$35.36	10	30	2

Hubbell Signalite Current Taps

With Tandem Blade Contacts

10 Amperes, 125 Volts

Signalites are suitable for use with all electrically-heated devices of 10 amperes, 125 volts or less.

Each plug is supplied with an electro-welded lamp guard to protect the lamp from breakage.

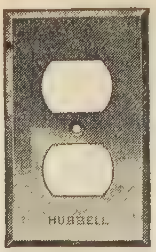
All brass parts are nickel-plated.

Cat. No.	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Per 100
6108	Without Lamp	2	10	4	$60.00
6109	Complete with Red Lamp	2	10	4	106.66
6101	125-Volt Red Lamp	2	10	1	46.66

GraybaR QUALITY SINCE 1869 Distributed and guaranteed by GraybaR ELECTRIC COMPANY

Hubbell Plates for Single and Duplex Convenience Outlets

Single, Single Plate



Duplex, Single Plate

Struck-Up—.040-Inch Metal

Brush Brass

Cat. No.	Single Per 100	Wt., Lbs. Std. *Pkg.	Cat. No.	Duplex Per 100	Wt., Lbs. Std. *Pkg.	Style Plates	Dimensions Inches
6835	$12.00	17	6854	$12.00	16	Single	4½x2¾
6836	39.60	16	6855	39.60	15	2-Gang	4½x4 9/16
6837	59.38	15	6856	59.38	14	3-Gang	4½x6⅜
Lacco Brass							
6780	$10.50	17	6784	$10.50	16	Single	4½x2¾
6838	28.28	16	6857	28.28	15	2-Gang	4½x4 9/16
6839	42.42	15	6858	42.42	14	3-Gang	4½x6⅜
Struck-Up—.060-Inch Metal							
Brush Brass							
5548	$22.10	26	6258	$22.10	24	Single	4½x2¾
5549	50.90	23	6259	50.90	22	2-Gang	4½x4 9/16
6840	76.36	20	6859	76.36	19	3-Gang	4½x6⅜
Solid Brass—.100-Inch Metal							
Brush Brass							
6585	$52.64	28	6587	$52.64	27	Single	4½x2¾
6586	105.28	24	6588	105.28	23	2-Gang	4½x4 9/16
5550	157.92	20	6260	157.92	20	3-Gang	4½x6⅜

*A carton consists of 10 single plates of a kind or equivalent in gangs. A standard package consists of 100 single plates of a kind or equivalent in gangs. Plates may be assorted for standard package or carton quantity.

Hubbell Blank Plates

Single Plate

Screw spacings 2⅜ inches on centers.

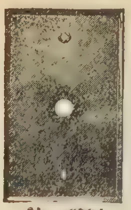
Struck-Up—.040-Inch Metal

Brush Brass

Cat. No.	Per 100	Style Plates	Dimensions Inches	Wt. Lbs. Std. *Pkg.
6959	$25.46	Single	4½x2¾	20
6960	50.90	2-Gang	4½x4 9/16	18
6961	76.36	3-Gang	4½x6⅜	16
Lacco Brass				
6785	$23.88	Single	4½x2¾	20
6962	47.74	2-Gang	4½x4 9/16	18
6963	71.64	3-Gang	4½x6⅜	16
Struck-Up—.060-Inch Metal				
Brush Brass				
6964	$31.10	Single	4½x2¾	30
6965	62.22	2-Gang	4½x4 9/16	28
6966	93.32	3-Gang	4½x6⅜	26
Solid Brass—.100-Inch Metal				
Brush Brass				
6970	$53.74	Single	4½x2¾	45
6971	107.46	2-Gang	4½x4 9/16	42
6972	161.20	3-Gang	4½x6⅜	37

*A carton consists of 10 single plates of a kind or equivalent in gangs. A standard package consists of 100 single plates of a kind or equivalent in gangs.

Hubbell Single and Double Outlet Telephone Plates

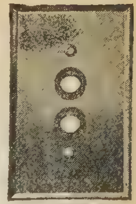


No. 6904

Single outlet plate has one hole in the center of each gang. Double outlet plate has 2 tapped holes per gang.

Each hole supplied with a ⅜-inch composition bushing.

Screw spacings, 2⅜ inches. Furnished with adapter to 3 9/32 inches.



No. 6935

Struck-Up—.040-Inch Metal

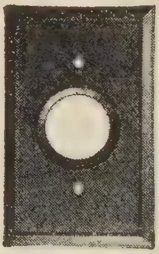
Brush Brass

Single Cat. No.	Single Per 100	Double Cat. No.	Double Per 100	Style Plates	Wt. Lbs. Std. *Pkg.
6904	$28.28	6935	$33.94	Single	30
6905	56.56	6936	67.88	2-Gang	28
6906	84.84	6937	101.80	3-Gang	26
Lacco Brass					
6907	$26.70	6938	$28.28	Single	30
6908	45.24	6939	56.56	2-Gang	28
6909	67.88	6940	84.84	3-Gang	26
Struck-Up—.060-Inch Metal					
Brush Brass					
6910	$33.94	6941	$39.60	Single	32
6911	67.88	6942	79.18	2-Gang	30
6912	101.80	6943	118.78	3-Gang	28
Solid Brass—.100-Inch Metal					
Brush Brass					
6923	$56.56	6947	$62.22	Single	35
6924	113.12	6948	124.44	2-Gang	33
6925	169.68	6949	186.64	3-Gang	31

*A standard package of plates for single receptacle consists of 100 single plates of a kind or equivalent in gangs. A standard package of plates for double receptacle consists of 100 single plates of a kind or equivalent in gangs. A carton consists of 10 single plates of a kind or equivalent in gangs. Plates may be assorted to make standard package or carton quantity.

Hubbell Bakelite Convenience Outlet Plates

Mat, Ornamental and Ribbed Finishes



No. 7093 Mat

No. 4094 Ornamental

No. 7094 Mat

Made of genuine bakelite, and regularly furnished in brown; black can be furnished on special order at $1.00 per 100 gangs extra.

The top surface of the mat plate has a stipple finish, set off by a narrow polished border.

The ribbed plate has a ribbed surface set off by a plain polished border; while the ornamental plate is also ribbed, but set off by a decorative border.

Carton, 10; standard package, 100.

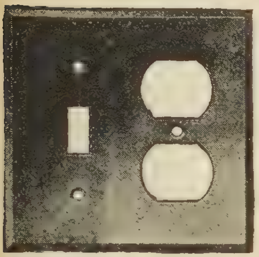
Mat Surface Cat. No.	Ribbed Surface Cat. No.	Ornamental Surface Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
†*7093	*9093	*4093	$8.42	For Single Outlet	10
†7094	9094	4094	8.42	For Duplex Outlet	10

†Price covers mat finish surface. For genuine sand blast finish, add $3.00 per 100 gangs.

*Regularly furnished with metal screws. When bakelite screws are furnished add $1.00 per 100 gangs in standard package quantities. Duplex plates furnished with metal screws only.

Hubbell 2-Gang Combination Plates

For Duplex Convenience Outlet and Square Handle Toggle Switch



Size of plates, 4½x4⁹⁄₁₆ inches.

Standard finish on flush plates is brush brass.

Carton, 2; standard package, 10.

Struck-Up—.040-Inch Metal

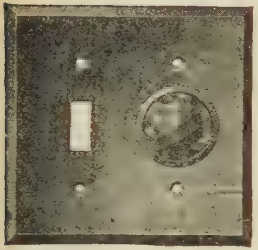
Brush Brass Cat. No.	Brush Brass Per 100	Lacco Cat. No.	Lacco Per 100
7105	$53.74	7106	$42.42

Struck-Up—.060-Inch Metal

7108	$65.04	....	......

Hubbell 2-Gang Combination Plates

For Round Bull's Eye and Square Handle Toggle Switch



Size of plates, 4½x4⁹⁄₁₆ inches.

Standard finish on flush plates is brush brass.

Carton, 2; standard package, 10.

Struck-Up—.040-Inch Metal

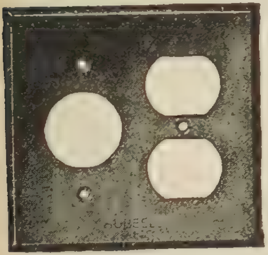
Brush Brass Cat. No.	Brush Brass Per 100	Lacco Cat. No.	Lacco Per 100
7073	$89.08	7074	$77.78

Struck-Up—.060-Inch Metal

7110	$100.40	....	......

Hubbell 2-Gang Combination Plates

For One Duplex and One Single Convenience Outlet



Size of plates, 4½x4⁹⁄₁₆ inches.

Standard finish on flush plates is brush brass.

Carton, 2; standard package, 10.

Struck-Up—.040-Inch Metal

Brush Brass Cat. No.	Brush Brass Per 100	Lacco Cat. No.	Lacco Per 100
7040	$53.74	7048	$42.42

Struck-Up—.060-Inch Metal

6749	$65.04	....	......

Hubbell Bakelite 2-Gang Combination Plates

Mat, Ornamental and Ribbed Finish

Plates made of genuine brown bakelite. Black plates supplied on order without extra charge. Gang plates or other combinations can be supplied in brass, finished brown, to imitate bakelite at imitation bakelite finish prices. With metal screws.

Carton quantity, 2 gangs; standard package, 10 gangs.

No. 7123-Mat

Mat Surface Cat. No.	Ribbed Surface Cat. No.	Ornamental Surface Cat. No.	Per 100	Wt., Lbs. Std. Pkg.
For Square Handle Toggle Switch, and Single Convenience Outlet				
7123	9123	4123	$28.00	1½
For Square Handle Toggle Switch, Duplex Convenience Outlet				
7140	9140	4140	$28.00	1½

Special Features Hubbell Standard Brass Flush Plates

Plates of Special Dimensions and Screw Spacings 0.100-Inch Metal Only

Plates of special dimensions and screw spacings furnished at $9.80 per 100 square inches plus the price of the nearest regular solid plate. In no case will charge be less than for a single solid plate. The above additions should be made to symbol plates only.

Plates with Round Corners and Round Edges 0.100-Inch Metal Only

For single plates with round corners and round edges having standard dimensions and screw spacings add $21.00 per 100 plates to the price of the single solid plates. For gang or combination plates with round corners and round edges add $21.00 per 100 plates for first section, and $7.00 per 100 plates for each additional section. Standard package, 10 plates of one style. Carton quantity, 1 plate.

Plates with Round Corners and Beveled Edges 0.100-Inch Metal Only

For single or gang plates with round corners and beveled edges add $21.00 per 100 plates. Standard package, 10 plates of one style. Carton quantity, 1 plate.

Plates with Raised Edges 0.100-Inch Metal Only

Plates with raised edges to cover device not flush with wall furnished in solid metal at a price of $400.00 per 100 for single plates and $200.00 per 100 for each additional gang, in addition to price of standard plate. Special prices apply to raised edges deeper than ½ inch.

Plates with Square Corners and Square Edges 0.100-Inch Metal Only

Plates with square corners and square edges having standard dimensions and screw spacings furnished at same price as regular solid plates. For plates with round corners and square edges, the additional charge is the same as given above for round corners and beveled edges.

Flush Plates of Special Metals

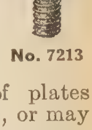
Description	*Extra per 100 Gangs
Aluminum Brushed, Solid or .060″	$20.30
Aluminum Polished, Solid or .060″	34.30
Bronze, Genuine, Brushed, Solid, .060″ or .040″	14.00
Bronze, Genuine, Polished, Solid, .060″ or .040″	28.00
Benedict Metal, (Nickel Silver), Polished or Brushed, Solid, .060″ or .040″	35.00

*For flush plates of special metals add prices above to prices of corresponding brass plates in brush brass finish.

Engraving

Flush plates stamped with words or numbers at $14.00 per 100 letters or numerals, standard package 100 letters or numerals.

Screws for Hubbell Bakelite Plates



No. 7213

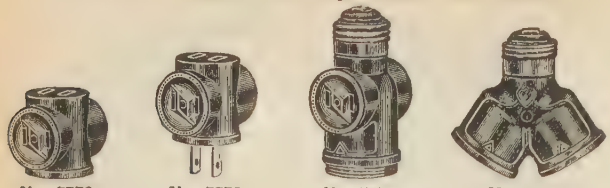
French head brass screws (D.5873) to match bakelite are supplied on all bakelite plates but bakelite headed screw No. 7213 may be had on special order at an advance in price of $1.06 per 100.

Special ornamental head screws and special screwdriver will be supplied with standard package quantities of plates when so specified, without extra charge, or may be purchased separately.

No. 7169 Screw, 7170 Screwdriver (Special Equipment)

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Ornamental Plate Screws				
7169	$.96	20	100	¼
Special Screwdrivers for Above				
7170	$13.14	1	5	¼
Bakelite Headed Screws				
7213	$2.12	100	500	2

H & H Bakelite Taps and Sockets



No. 7778 No. 7772 No. 7774 No. 7773

The current tap faces have standard finding groove feature which guides the attachment plug when inserting.

The No. 7778 Cord Cube Tap is used to make extension cord sets of any desired length.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
7778	$10.50	Cord Cube Tap	25	100	25
7772	8.50	Cube Tap	25	100	25
7774	13.00	Current Tap	25	100	25
7773	13.00	2-Way Socket	25	100	25

H & H Attachment Plugs and Caps

No. GB No. GD No. GR No. GG No. GN No. GNL

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Pkg.
GB	$3.80	Bakelite, ¼-Inch Hole	50	500	19
GD	3.80	Bakelite, 13/32-Inch Hole	50	500	19
		With Pull Handle			
GR	$5.20	Bakelite, 5/16-Inch Hole	25	100	6
GG	10.00	Rubber, 13/32-Inch Hole	25	100	8
GN	10.00	Rubber, 5/16-Inch Hole	25	100	8
GNL	10.00	Rubber Extra Long Handle	25	100	9

H & H Bakelite Convenience Outlets

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

These convenience outlets are all bakelite and moisture-proof throughout. The face has a modernistic design and finding grooves.

No. 7725-B

No. 1913-G

No. 1914

Top Wired

Binding screws are handily placed on the top of the base. Connections may be completed after receptacle is fastened to wall case.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
7724	$26.26	Single, with Plaster Ears	10	100	28
7725	38.38	Duplex, with Plaster Ears	10	100	32
		Top Wired, 4 Screws			
7725-B	$38.38	Duplex, with Plaster Ears	10	100	21
		Side Wired, 4 Screws			
1913	$29.00	Duplex	10	100	21
1913-G	29.00	Duplex, with Plaster Ears	10	100	23

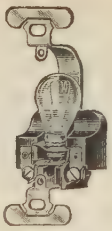
The 4 binding screws speed up through wiring because no splices are necessary. Wires can be cut at first binding screw and continued from second screws for additional outlets.

2-Circuit

One circuit or one outlet is left "Always On," for various electric appliances. The other circuit may be used for floor and table lamps controlled from a switch at the doorway.

1914	$35.06	2 Feeds, 1 Return	10	100	21
1914-G	35.06	2 Feeds, 1 Return, Plaster Ears	10	100	23
1915	35.06	2 Feeds, 2 Returns	10	100	21
1915-G	35.06	2 Feeds, 2 Returns, Plaster Ears	10	100	23

H & H Warning Lights



No. 2999

When the current is on, a candelabra lamp (mounted in the porcelain base) glows through the ruby, cut-glass bull's-eye and serves as a reminder to turn current off when not needed. It saves current, prevents injury to irons or heaters, and helps to prevent fire.

The lamp socket is hinged to the base, permitting the lamp to be easily inserted and reducing the lamp breakage.

Carton, 10. Standard package, 30.

For 125 and 220-Volt Circuits

No. 3000

Cat. No.	Per 100	Description	Pkg. Wt. Lbs.
2999	$98.98	Receptacle with 2-C.P., 125-Volt Candelabra Base Lamp	14
3000	88.00	Single Plate with Bull's-Eye, 4½x2¾ Inches	13
		Separable Bull's-Eye	
1513	$35.36	Rectangular for No. 8841 Square Handle Tumbler Plates	3
8619	35.36	Round for Single Convenience Outlet Plates	3

H & H 2-Gang Unit Combinations with Warning Lights

Double-Pole, with .040-Inch Chromium Plates

Switch Rating, 20 Amperes, 250 Volts

Nos. 5350, 5358 Nos. 5351, 5359 Nos. 5355, 5362

Made in two styles: Switch controlling outlet, in series; and switch and receptacle independent of each other, separate.

Carton, 2. Standard Package, 10.

Cat. Nos. Series	Separate	Per 100	Description	Amperes 125 Volts	250 Volts	Pkg. Wt., Lbs.
5350	5358	$369.26	Regular T Slots	15	10	10
5351	5359	447.64	3-Wire (2-Wire with Ground)	15	10	10
5355	5362	435.52	2-Wire Polarized	..	20	10

H & H Receptacle and Bull's-Eye

With .060-Inch Brass Plate

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7711	$181.80	2	10	8

No. 7728

H & H Receptacle and Bulls' Eye

With Bakelite Plate

15 Amps., 125 Volts: 10 Amps., 250 Volts

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt.
7728	$181.80	Complete Unit with Plate	2	10	7
7729	58.18	Bakelite Plate, with Jewel	2	10	3

H & H Switch and Receptacle Combinations

Double-Pole

With .060-Inch Brass Wall Plate

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

The L slots in receptacle part take tandem or parallel attachment plug blades.

Operating lever and receptacle cap are of bakelite.

With Composition Base

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
8998	$175.74	2	10	8

With Porcelain Base

8974	$163.62	2	10	8

H & H Switch and Receptacle Combinations

Double-Pole

With Hegemite Plates and Composition Base

Has receptacle opening and hegemite plate in one molded piece.

The L slots in receptacle part take tandem or parallel attachment plug blades.

Operating lever and receptacle cap are of bakelite. Brown handles are standard.

10 Amperes, 250 Volts

Cat. Nos. Border Design	Cat. Nos. Matte Surface	Per 100	Carton	Std. Pkg.	Pkg. Wt. Lbs.
3974	4192	$175.74	2	10	8

20 Amperes, 250 Volts

3976	4194	$187.86	2	10	8

Above ratings are for switches. Receptacle part rated 15 amperes, 125 volts; 10 amperes, 250 volts.

No. 7739

No. 7759

H & H 1-Gang Unit Combinations

Warning Light and Tumbler Switch

Brass or Bakelite Plate

Warning light shows when lights are left on. Jewel is flush with the plate.

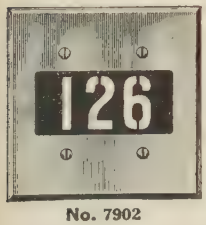
Carton, 2. Standard package, 10.

Single-Pole

Cat. No.	Per 100	Description	Amperes 125V.	Amperes 250V.	Pkg. Wt.
7739	$282.80	Brass Plate	10	5	12
7759	282.80	Bakelite Plate	10	5	12
		Double-Pole			
7956	$282.80	Brass Plate	..	10	12
7957	282.80	Bakelite Plate	..	10	12
		3-Way			
7953	$282.80	Brass Plate	10	5	12
7954	282.80	Bakelite Plate	10	5	12

Can be supplied in lock style at an addition of 90 cents each; add L to Cat. No.

H & H Illuminated House Number Units



No. 7902

For homes and apartments, 110-volt service. A regular wiring device connected to usual lighting circuit. Can be controlled from an inside switch.

Numbers are white, illuminated at night. Cadmium finish plate fits over a rubber mat to make a weatherproof job. Standard candelabra base lamp is furnished.

Carton, 2. Standard package, 10.

Cat. No.	Per 100	Description	Pkg. Wt.,
7901	$227.26	1-Gang Unit Complete	8 lbs.
7902	318.16	2-Gang Unit Complete	15 lbs.
7900	60.60	Number Series 0–9, 10 Spacers	12 oz.
7900–0 to 7900–9	4.04	Separate Numbers	1¼ oz.
7900–S	2.02	Spacer	1¼ oz.

H & H Bakelite Radio Outlets

Single

No. 2147

For ground and aerial connections.

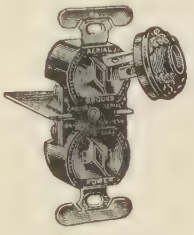
Fits a standard wall case and takes standard brass or bakelite plates.

Receptacle is brown bakelite with patented finding grooves.

Slots and plug fingers are set at an angle so that it is impossible to reverse aerial and ground when inserting plugs.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
2147	$51.00	Receptacle and Cap	2	10	2
2190	62.58	Receptacle, Cap, and Bakelite Plate	2	10	3

Duplex



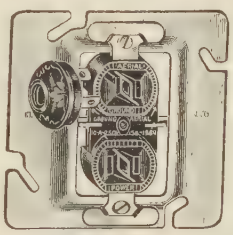
No. 2145

For aerial, ground, and power connections. Similar to the Single, except the addition of a standard power outlet.

Because of the angle of the slots, aerial-ground caps and power caps cannot be interchanged.

Fits standard wall cases, and standard duplex brass and bakelite plates.

2145	$99.36	Receptacle and Cap	2	10	12
2146	109.88	Receptacle, Cap, and Bakelite Plate	2	10	15



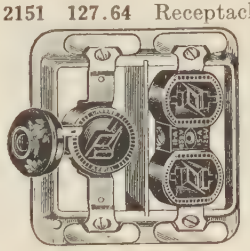
No. 2151

Duplex, with Cover for 4x4-Inch Box

Specially designed to meet revised Underwriters requirements covering low tension radio circuits and power circuits in the same box.

Furnished complete with box cover and barrier.

2180	$138.16	Receptacle, Cap, Cover, and Bakelite Plate	2	10	9
2181	139.74	Receptacle, Cap, Cover, and Brass Plate	2	10	10
2151	127.64	Receptacle, Cap, Cover, no Plate	2	10	8



No. 2150

2-Gang, with Cover for 4x4-Inch Box

This specially designed cover is approved by the Underwriters for low tension radio outlets and power outlets in the same box.

Duplex receptacle gives radio power and portable lamp connections at the same time from one outlet.

2182	$162.82	Radio Receptacle, Duplex Receptacle, Cap, Box Cover, and Brass Plate	2	10	10
2183	164.54	Radio Receptacle, Duplex Receptacle, Cap, Box Cover, and Bakelite Plate	2	10	9
2150	142.50	Radio Receptacle, Duplex Receptacle, Cap, and Cover	2	10	8

2-Gang, for Standard Wall Cases

Gives aerial, ground, and power outlet, with an extra outlet for table or floor lamp.

2184	$124.14	Radio Receptacle No. 2149, Duplex Receptacle, Cap, and Bakelite Plate	2	10	6

The .040-inch brass plates are regularly supplied, but .060-inch or solid brass plates will be furnished if desired at regular advances.

Hemco Heater and Cube-Tap Cord Sets

No. HC630G

No. HC633

Made with labeled cord and listed as standard by Underwriters' Laboratories. Switch and switchless plugs have a rating of 10 amperes, 125 volts; 5 amperes, 250 volts.
Carton, 10. Standard package, 50.

Heater Cord Sets

Cat. No.	Per 100 Packed	Per 100 Bulk	Description	Pkg. Wt., Lbs.
HC630	$51.20	$48.20	With 6 Feet 3M Cycle Br. Heater Cord with Switch Plug...	26
HC630G	54.20	51.20	Same as HC630 Except has HG Handle Grip Attachment.....	23
HC633	34.66	31.66	6 Feet 3M Cycle Br. Heater Cord with Switchless Plug..	21
HC830	55.28	52.28	8 Feet 3M Cycle Br. Heater Cord with Switch Plug.....	29
HC833	38.74	35.74	8 Feet 3M Cycle Br. Heater Cord with Switchless Plug..	25

Cube-Tap Cord Sets

HR0618	$35.48	$32.48	6 Feet No. 18 Rayon Cord....	16
HR0918	41.36	38.36	9 Feet No. 18 Rayon Cord....	18
HR1218	42.44	44.44	12 Feet No. 18 Rayon Cord...	20
HR1518	53.32	50.32	15 Feet No. 18 Rayon Cord...	24

When equipped with HG Handle Grip, add G to Cat. No. and $3.00 per list price per 100 sets or devices.
When equipped with HF Cap, add $1.50 per 100 sets.
When equipped with HRA or HRB Caps, add $5.95 per 100 sets.

Hemco Appliance Switch Plugs and Cord Switches

No. HG

No. H280

No. H271

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
HG	$5.00	Handle Grip Attachment for Appliance Plugs....	10	100	3
H280	23.16	Templus Switch Plug....	10	50	10
H271	30.52	Templus Cord Switch, Single-Pole.....	10	50	5

Hemco Switchless Plugs

No. H250

No. H738

No. H738G

No. H966

No. 669

H250	$25.00	Templus Switchless Plug	10	100	17
H738	8.42	Templus Switchless Plug	10	100	16
H738G	11.42	No. H738 with No. HG..	10	100	16
H966	11.00	Templus Switchless Table Appliance Plug.....	10	100	11
H667	42.42	Templus Switchless Plug, Monel Silver Contacts.	10	100	6
H669	21.28	Templus Switchless Plug, Tempeloid Contacts...	10	100	6

H & H Screwless Bakelite Heater Plugs

With Clip Fastening

No. 7762 No. 7760

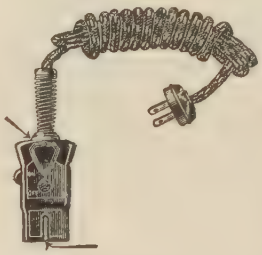
There are no screws to lose or loosen on these plugs. Bakelite sections are held together by spring clips which are self adjusting to yanks, strains, and temperature changes.

Plugs are made with or without switch.

The design of the contact clips has been improved and they will give excellent service without pitting or burning.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt., Lbs.
7762	$29.00	With Switch.....	25	100	20
7760	13.00	Without Switch.....	25	100	13

H & H Heater Plug Cord Sets


No. 154

Made with high quality 3000-cycle test heater cord and clip fastening bakelite heater plugs, with or without switch control.
Underwriters' approved; each set has screwless heater plug held together by spring clips.
Packed in cartons of 10. No. 151 packed 50 to a standard package; weight, 19 pounds. Nos. 152, 154 and 155 packed 50 to a standard package; weight, 21 pounds.
Guaranteed one year.

No. **151**, 6-Foot Length, Switchless.....per 100 **$50.00**
No. **152**, 8-Foot Length, Switchless.....per 100 **60.00**
No. **154**, 6-Foot Length, Switch Plug.....per 100 **65.00**
No. **155**, 8-Foot Length, Switch Plug .....per 100 **75.00**

Acorn Appliance Plugs

Bakelite

No. 460

Cat. No.	Per 100	Description	Rating	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
460	$8.42	Without Switch	10A.-125V. 5A.-250V.	10	100	14
462	16.84	With Switch	6A.-125V. 3A.-250V.	10	50	11

H & H Fan Hanger Outlets

No. 7750

This device provides electrical connection and mechanical support for fans.
Fits a standard 4-inch square box.
Has all-bakelite receptacle with finding grooves.
Two standard types are supplied: Clamp Type for the average job where outlet fastens to the box cover, and Stud Type where hickey fastens to box stud.
Brush brass .060-inch plate is standard.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt.
7750	$244.00	Clamp Type, Complete with Plate.....	10	50	32
7751	244.00	Stud Type, Complete with Plate	10	50	32
7752	218.80	Clamp Type, without Plate.....	10	50	22
7753	218.80	Stud Type, without Plate.....	10	50	22
7755	25.20	.060-Inch Brass Plate for Nos. 7752 and 7753.....	10	50	10

H & H Clock Hanger Outlets

Provides a mechanical support for the clock and electrical connection.
Receptacle is recessed so plug cap goes flush with the plate.
Complete with brush brass .040-inch plate.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7707	$141.40	2	10	8

FA Hanger Outlets

Fixture Stud Type

Designed for use with standardized outlet box and 3/8-in. fixture stud. Furnished with beveled edge face plate, bakelite receptacle and special fan supporting bracket which is adjustable for plumbing the outlet if box is out of line. A heavy steel stud (1/4–20) with brass washer for attaching fan, is furnished.

Box is not furnished. Any NEMA 4x4x1½-inch outlet box with 3/8-in. fixture stud and NEMA rectangular opening single switch cover, ½ in. deep, can be used.

Cover is 2¾x4½-in. (.060-in.) struck-up brass, brush brass or black finish; bakelite receptacle which is included in price.

Prices on finish to match Bakelite, and special finishes upon request, with sample. Special finishes are difficult to match and it is recommended that plates be purchased unfinished, so special finish can be applied locally.

Carton, 1; standard package, 50; weight, std. pkg., 29 pounds.

Each.. **$3.50**

FA Security Hanger Outlets

Primarily designed for fan service, this outlet readily lends itself as a utility outlet for heaters, show-window floodlights, and various electrical appliances.

Adaptable to all classes of modern buildings and approved by the Underwriters' Laboratories for supporting oscillating fans up to and including 16-inch.

Furnished with a pressed steel box, 4x4x1½ inches; four corners of box fitted with substantial supports to which steel box cover is fastened. Box has ½ and ¾-inch knockouts. Brass cover plate fastens to steel box cover. Adjustable bracket, to which fan is fastened by ¼-inch steel stud, is riveted to back of box. Heavy brass adjusting stud allows for variation in plaster. Furnished with .060-inch struck-up brush brass finish cover plate, 2¾x4½ inches, and special outlet box with bakelite T-slot receptacle.

Individual cartons; std. pkg., 50; wt. std. pkg., 90 lbs.
Complete, Brush Brass or Black Finish.........each **$4.00**

Polarized receptacle, 50 cents additional.

No. 7707 Hubbell Bakelite Electric Clock Hanger Outlets

This device allows the clock to hang flush with the wall and to cover neatly the electrical outlet.

The attachment plug is out of the way of the clock.

No unsightly and often dangerous wires need show, yet the clock can be removed and installed in a few seconds.

With .040″ Brass Plate

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7707	$141.40	2	10	5

No. 3750 Bryant Fan Hanger Outlets

Yoke Type

15 Amperes, 125 Volts; 10 Amperes, 250 Volts

No. 3750 Complete

Designed primarily as a fan hanger outlet, but is adapted for individually illuminated pictures, electric heaters, radio loud speakers, etc. May be hung on supporting screw so as to conceal the receptacle outlet, cord, and hangings.

Rigid vibration-proof assembly.

Uses standard square outlet box and cover with raised rectangular opening.

A heavy gauge sherardized steel plate supports the receptacle.

Brass finishing plate is held independently.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
3750	$244.00	10	50	45

R & S Fan Hanger Outlets

Adapted for individually illuminated pictures, electric heaters, radio loud speakers, etc. Pictures can be hung on supporting screw, concealing receptacle outlet, cord and hangings.

Heavy gauge cadmium steel plate supports receptacle. This construction permits installation and wiring less finishing plate prior to final decorating of walls.

Receptacle with supporting straps welded to steel plate prevents loosening due to vibration.

Heavy gauge brass (2¾x4½ inches) finishing plate held independently, prevents loosening of plate on failure to replace the fan hanger supporting screw when fan is removed.

Yoke Lock Type

No. 661

The yoke lock fan hanger affords convenience, flexibility and low cost installation.

Has rigid vibration-proof assembly; standard square outlet box and cover with raised rectangular opening. This permits the contractor installing standard material throughout.

With yoke lock clamping device and 2-point support produced by assembly of brass toggle and malleable iron yoke.

Standard package, 50. Approximate net weight each, 7/8 pound.

Stud Lock Type

No. 649

Complete with specially constructed heavy gauge galvanized steel cover and box with ½ and ¾-inch k.o. in back and four sides.

With secure and rigid assembly of malleable iron stud to box with lock nut and additional cotter safety pin. This prevents loosening from constant vibration.

Standard package, 50. Approximate net weight each, 1½ pounds.

Description	Yoke Lock Type Cat. No.	Yoke Lock Type Each	Stud Lock Type Cat. No.	Stud Lock Type Each
2-Wire T Slot Type, with Brush Brass Plate	661	$3.50	649	$4.00
2-Wire T Slot Type, with Brown Bakelite Finished Plate	662	3.75	729	4.25
2-Wire Polarized Type with Brush Brass Plate	719	4.00	647	4.50
2-Wire Polarized Type with Brown Bakelite Finished Plate	720	4.25	792	4.75
2-Wire Polarized Type with Telephone Bronze Plate	654	4.50	797	5.00
3-Wire Polarized Type with Brush Brass Plate	653	4.50	637	5.00
3-Wire Polarized Type with Brown Bakelite Finished Plate	723	4.75	799	5.25

Fan hangers can be supplied in other finishes; prices upon application.

R & S Ever-Lok Receptacles, Plugs and Cord Connectors

Ever-lok fittings are for use with portable motor-driven tools, hand portable appliances, timestamps, adding machines, etc. They are mistake-proof and connect or disconnect only one way assuring an accident-proof connection.

Ever-lok receptacles, plugs and cord connectors are polarized.

Exteriors are heavy steel, cadmium finish.

Arrows on shells indicate line-up of only position in which connection can be made. Plug cannot be inserted from any other position.

Interiors are molded bakelite, grooved to fit corresponding upset lugs on shells so that improper assembly or alignment of interior is impossible.

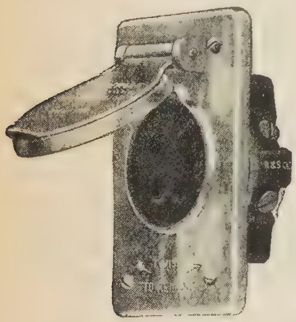
Contacts are properly marked to maintain identification of polarity throughout.

Fittings are automatic locking. Outer shell of plug floats on inner shell and turns within limits allowed by two pins in two slots on opposite sides of shell. As plug is inserted in connector or receptacle, lugs on outer shell ride diagonally down into funnel-shaped grooves until they strike the bottom, then outer shell turns on its axis by means of a spring in its base and lugs snap into position, automatically locking plug.

To disconnect plug it is necessary to grasp it firmly and give a short reverse twist to bring lugs back out of position to where they will pull out. Outer shoulders are knurled to facilitate this action, but plug cannot be withdrawn without first giving it this reverse twist.

Standard package, 100 assorted pieces.

Receptacles and Rectangular Covers



Can also be furnished with cast iron conduit box No. 8009 for surface mounting or for mounting to standard switch box cover for flush work.

10 Amperes, 250 Volts D.C.—440 Volts A.C.

Cat. No.	8002	8003	8008
Wires....	2	3	4
Each....	$2.50	2.60	2.70

20 Amperes, 250 Volts D.C.—440 Volts A.C.

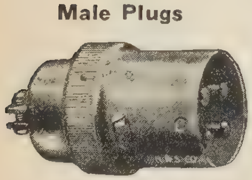
Cat. No.	8006	8005	8004
Wires....	2	3	4
Each....	$2.65	2.75	2.85

Receptacles with Round Covers

Cover is provided with 4 screw hole knockouts. Can be furnished with cast iron conduit box No. 8039 for surface mounting.

Cat. No....	8032	8033	8034
Wires.......	2	3	4
Each.......	$2.50	2.60	2.70

Male Plugs



10 Amps., 250 Volts D.C.—440 Volts A.C.

Cat. No.	8012	8013	8018
Wires....	2	3	4
Each....	$1.60	1.70	1.80

20 Amps., 250 Volts D.C.—440 Volts A.C.

Cat. No.	8016	8015	8014
Wires....	2	3	4
Each....	$1.65	1.75	1.85

Female Connectors

10 Amps., 250 Volts D.C.—440 Volts A.C.

Cat. No.	8022	8023	8028
Wires....	2	3	4
Each....	$2.35	2.45	2.55

20 Amps., 250 Volts D.C.—440 Volts A.C.

Cat. No.	8026	8025	8024
Wires....	2	3	4
Each....	$2.55	2.65	2.75

R & S Switch Box Type Receptacles and Plugs

2-Wire

No. 121

10 Amperes, 250 Volts

The receptacle bodies and plugs are constructed of moulded bakelite with self-aligning contacts. They are made in two types, polarized and reversible.

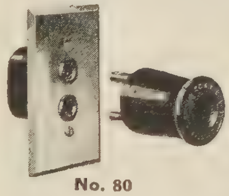
Standard finish is brush brass. All other finishes are extra.

Description	Weight Pounds	Reversible Cat. No.	Reversible Each	Polarized Cat. No.	Polarized Each
Complete with Plug............	¾	121	$2.80	346	$2.80
Plug Only.....................	¼	120	1.20	347	1.20

R & S Heavy Duty Receptacles and Plugs

2 and 3-Wire—Polarized

30 Amperes, 250 Volts



No. 80

Particularly desirable for use for stereopticon machines, heavy duty toasters, floor surfacing machines, etc.

Fits standard switch box cover.

Receptacles and plugs are constructed of cold moulded bakelite with self-aligning contacts. Plugs have cable grip in handle.

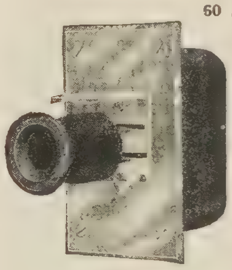
Standard finish is brush brass. All other finishes are extra.

Cat. No.	Each	Description	Wt., Lbs.
80	$3.75	2-Wire, Complete with Plug..............	1
556	1.80	2-Wire, Plug Only.......................	¼
81	5.50	3-Wire, Complete with Plug..............	1½
157	2.10	3-Wire, Plug Only.......................	¾

R & S Flush Wall Type Receptacles and Plugs

2-Wire—Polarized

60 Amperes, 250 Volts



No. 14

For electric range connection, motion picture machines, etc. Heavy moulded bakelite with bronze switch jaw type spring contacts. Japanned cast iron box (galvanizing extra) 6x3½x4½ inches deep. Plate, 7x4-inch solid brass 5/32-inch thick,. with flush gravity flap. Brush brass finish; other finishes extra. Solid bronze plates to order. Outlets, 1¼-inch maximum conduit in any side.

Cat. No.	Each	Description	Wt., Lbs.
14	$19.20	Complete with Plug.....................	7½
141	21.00	Same as No. 14 but with Lock and Key..	7½
140	4.20	Plug Only..............................	½

No. 478 R & S Combination Water-tight Switch, Receptacle and Plug

Cast Brass Boxes and Cover—2-Wire—Polarized

10 Amperes, 125 Volts

Combination of single-pole switch and 2-wire receptacle mounted in one box as illustrated.

Maximum conduit, ¾ inch straight through.

Specify size and location of outlets when ordering.

No. **478**, Complete with Plug and 4⅛x3x1½-Inch Box, Weight 3 Pounds.........................each **$6.00**

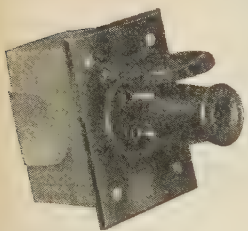
No. **452**, Plug Only, Weight ¼ Pound...........each **1.00**

R & S Flush Type Receptacles and Plugs

Cast Iron Galvanized Boxes with Overhanging Brass Covers

Weatherproof Type—2 and 3-Wire—Polarized

30 Amperes, 250 Volts



Size box, 4¼x3x3 inches.

Bakelite receptacle and plug with heavy self-aligning machined contacts; cable grip is incorporated in plug handle. Plugs will also fit floor receptacles, connectors and other wall receptacles.

Solid brass plates, 5¼x4 inches, with hinged spring flap cover. Standard finish, black oxidized; other finishes are extra.

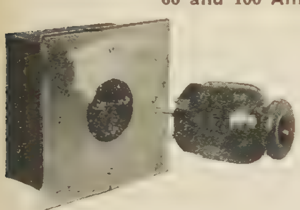
Maximum conduit, 1¼ inches. Specify size and location of outlets when ordering.

Cat. No.	Each	Description	Approx. Wt. Lbs.
31	$10.50	2-Wire, Complete with Plug	5½
556	1.80	2-Wire Plug Only	¼
25	12.90	3-Wire, Complete with Plug	5¾
157	2.10	3-Wire Plug Only	¾

R & S Flush Type Receptacles and Plugs

3 and 4-Wire—Polarized

60 and 100 Amperes, 250 Volts



Suitable for electric range connection, motion picture machines or wherever a flush outlet is desired.

Receptacle interior and plug base of moulded composition with self-aligning machined contacts. Plugs also fit floor receptacles and other wall receptacles.

Steel boxes, japanned.

Solid brass plates, ⅛ inch thick; 60 ampere, 6x6 inches; 100 ampere, 8x8 inches. Outlets: 60 ampere, maximum conduit, 1½ inches (slip hole); 100 ampere, maximum conduit, 3½ inches (slip hole). Specify size and location of outlets when ordering.

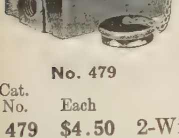
Cat. No.	Each	Description	Size Box In.	Approx. Wt. Lbs.
1762	$16.80	60-A., 3-W., with Plug	5 x5 x3	4½
150	4.80	60-A., 3-W., Plug Only	....	¾
1763	19.20	60-A., 4-W., with Plug	5 x5 x3	4½
337	6.00	60-A., 4-W., Plug Only	....	¾
1791	24.00	100-A., 3-W., with Plug	6¾x6¾x6	8
975	7.20	100-A., 3-W., Plug Only	....	1½

R & S Watertight Receptacles and Plugs

Cast Brass Boxes and Covers

Standard Rectangular Type—2, 3 and 4-Wire—Polarized

10 Amperes, 125 Volts



No. 479

Maximum conduit, ¾ inch straight through.

Specify size and location of outlets when ordering.

Cat. No.	Each	Description	Wt. Lbs.
479	$4.50	2-Wire, with Plug and 4⅛x3x1½-In. Box	2¾
452	1.00	2-Wire Plug Only	¼
1479	5.50	3-Wire, with Plug and 4⅛x3x1¾-In. Box	3
1453	1.50	3-Wire Plug Only	¼
1579	8.50	4-Wire, with Plug and 4x4x1½-Inch Box	3½
1463	2.50	4-Wire Plug Only	½
		Gang Type	
495	$6.60	2-Gang with 2 Plugs and 4⅛x3x1½-In. Box	3½
638	9.00	3-Gang with 3 Plugs and 6¼x3x1½-In. Box	4½
639	12.00	4-Gang with 4 Plugs and 8x3½x1½-In. Box	6¼
452	1.00	Plug Only	¼

No. 447 R & S Watertight Receptacles and Plugs

Standard Round Type—2-Wire—Polarized

10 Amperes, 125 Volts

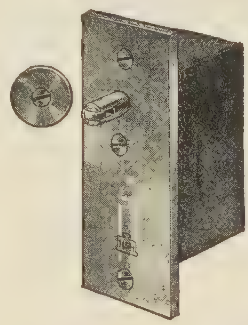
Box, 3 inches in diameter, 1⅝ inches deep.

Maximum conduit, ¾ inch one way.

Specify size when ordering.

No. **447**, Complete with Plug, Weight 2 Pounds..each **$4.00**
No. **452**, Plug Only, Weight ¼ Pound...........each **1.00**

H & H Automatic Door Switches



For automatically operating a light upon opening and closing of a door. Has a roller-tip plunger, which rolls across the edge of door as it closes, and prevents friction and strain on switch mechanism.

Enclosed in a rolled steel base.

A small round plate with screw is furnished for placing on edge of door where plunger strikes it.

Dimensions of plate, 3¾x1¼ inches. Mortise required, 2⅝x1$\frac{1}{16}$ inches; 1¾ inches deep.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
2022	$318.16	Light On when Door is Open	5	25	20
2023	318.16	Light On when Door is Closed	2	10	10

Perkins Self-Restoring Door Switches

Automatic—Complete with Outlet Box

Single-Pole—6 Amperes, 125 Volts; 3 Amperes, 250 Volts

No. 2355

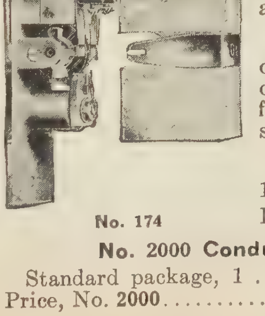
Complete with brass plate 4⅝x1¼-inch and with brass strike plate. Standard finish of plates, brush brass.

Box is 3⅝ in. long, 1¼ in. wide, 2⅝ in. deep; has a ⅝-in. knockout in bottom, ⅝-in. knockout in one end and ⅞-in. knockout in other end.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
Switch is On When Door is Open				
2355	$353.50	1	25	20
Switch is Off When Door is Open				
2356	$353.50	1	10	10

Switch only (no box or plates) $248.16 per 100. Standard package same as complete switch. Plates only (2) $70.00 per 100. Standard package 10.

No. 174 Eco Edwards Door Switches



No. 174

Used in places where lights are to be turned on and off automatically by the opening and closing of a door. Finished in polished brass.

Operation: door shut, light off; open door, light on; enter and close door, light stays on; open door for exit, light off; shut door, light stays off.

Standard package, 1 . Weight, 11 ounces.

Price, No. **174**.........each **$8.50**

No. 2000 Conduit Boxes for Switches

Standard package, 1 . Weight, 12 ounces.

Price, No. **2000**...............................each **$1.25**

Bryant Single-Pole Surface Switches With Metal Covers

With Porcelain Base and Round Composition Handle

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

2" Porcelain Base; No. 2777 Round Composition Handle

Diameter of porcelain base, 2 inches.
Height over cover, $1\frac{13}{32}$ inches.
Height over handle, $1\frac{15}{16}$ inches.
Supporting screw spacing, $1\frac{3}{8}$ inches.

Nos. 2220 and 2035 can be supplied, on special order, at no advance in price, on a base $1\frac{3}{4}$ inches in diameter, which is the diameter of the metal cover.

Cat. No.	Per 100	Style Base	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2220	$36.00	Solid	10	100	24
2000	36.00	Slotted	10	100	25
2035	42.00	Solid, Indicating	10	100	25
2047	42.00	Slotted, Indicating	10	100	25

2¼" Porcelain Base; No. 2777 Round Composition Handle

Diameter of porcelain base, $2\frac{1}{4}$ inches.
Height over cover, $1\frac{13}{32}$ inches.
Height over handle, $1\frac{15}{16}$ inches.
Supporting screw spacing, $1\frac{1}{2}$ inches.

2254	$56.56	Solid, Indicating	10	100	31
2255	56.56	Slotted, Indicating	10	100	31

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

2 7/16" Porcelain Base; No. 2778 Round Composition Handle

Diameter of porcelain base, $2\frac{7}{16}$ inches.
Height over cover, $1\frac{9}{16}$ inches.
Height over handle, $2\frac{1}{4}$ inches.
Supporting screw spacing, $1\frac{3}{4}$ inches.

No. 2036 can be supplied, on special order, at no advance in price, on a base $2\frac{1}{4}$ inches in diameter, which is the diameter of the metal cover.

2036	$84.00	Solid, Indicating	10	100	35
2048	84.00	Slotted, Indicating	10	100	39

20 Amperes, 125 Volts; 10 Amperes, 250 Volts

3" Porcelain Base; No. 2780 Flat Composition Handle

These switches can be used very satisfactorily for inductive loads.

Diameter of porcelain base, 3 inches.
Height over cover, $1\frac{3}{4}$ inches.
Height over handle, $2\frac{5}{8}$ inches.
Supporting screw spacing, $2\frac{3}{8}$ inches.

2833	$155.54	Solid, Indicating	1	10	6
2834	155.54	Slotted, Indicating	1	10	6

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

1 13/16" Porcelain Base; No. 2777 Round Composition Handle

The metal cover extends over and covers the porcelain base.

Diameter of porcelain base, $1\frac{13}{16}$ inches.
Height over cover, $1\frac{1}{2}$ inches.
Height over handle, $2\frac{1}{32}$ inches.
Supporting screw spacing, $1\frac{3}{8}$ inches.

2430	$56.56	Solid, Indicating	10	100	25

Standard finish on all metal covers of surface switches unless otherwise noted is polished nickel which will be supplied when finish is not specified.

Rotary switches can be converted into lock switches by removing the handles and substituting No. 2384 Universal Rotary Switch Lock Attachment.

Bryant Double-Pole Surface Switches With Metal Covers

With Porcelain Base and Flat Composition Handle

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

2" Porcelain Base; No. 2777 Round Composition Handle

Diameter of porcelain base, 2 inches.
Height over cover, $1\frac{9}{16}$ inches.
Height over handle, $2\frac{1}{16}$ inches.
Supporting screw spacing, $1\frac{3}{8}$ inches.

No. 2393 can be supplied, on special order, at no advance in price, on a base $1\frac{3}{4}$ inches in diameter, which is the diameter of the metal cover.

Cat. No.	Per 100	Style Base	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2393	$99.54	Solid, Indicating	10	100	27
2394	99.54	Slotted, Indicating	10	100	29

10 Amperes, 250 Volts

2 7/16" Porcelain Base, No. 2778 Round Composition Handle

Diameter of porcelain base, $2\frac{7}{16}$ inches.
Height over cover, $1\frac{9}{16}$ inches.
Height over handle, $2\frac{1}{4}$ inches.
Supporting screw spacing, $1\frac{3}{4}$ inches.

No. 2038 can be supplied, on special order, at no advance in price, on a base $2\frac{1}{4}$ inches in diameter, which is the diameter of the metal cover.

2038	$118.22	Solid, Indicating	10	100	38
2050	118.22	Slotted, Indicating	10	100	38

20 Amperes, 250 Volts

3 1/32" Porcelain Base, No. 2779 Flat Composition Handle

Diameter of porcelain base, $3\frac{1}{32}$ inches.
Height over cover, $1\frac{23}{32}$ inches.
Height over handle, $2\frac{13}{32}$ inches.
Supporting screw spacing, $2\frac{3}{16}$ inches.

2040	$233.32	Solid, Indicating	1	30	18
2052	233.32	Slotted, Indicating	1	30	21

30 Amperes, 250 Volts

3 9/16" Porcelain Base; No. 2780 Flat Composition Handle

Diameter of porcelain base, $3\frac{9}{16}$ inches.
Height over cover, $1\frac{15}{16}$ inches.
Height over handle, $2\frac{3}{4}$ inches.
Supporting screw spacing, $2\frac{9}{16}$ inches.

The holes in these switches are elongated to provide also $2\frac{3}{4}$-inch spacing, making them suitable for attachment to $3\frac{1}{4}$-inch outlet boxes, Type WD Octagonal Unilets, Type 700 Adaptiboxes, and Type SE Condulets.

2042	$279.98	Solid, Indicating	1	30	30
2054	279.98	Slotted, Indicating	1	30	29

5 Amperes, 125 Volts; 5 Amperes, 250 Volts

1 29/32" Porcelain Base; No. 2777 Round Composition Handle

Diameter of cover, $1\frac{29}{32}$ inches.
Height over cover, $1\frac{17}{32}$ inches.
Height over handle, $2\frac{1}{16}$ inches.
Supporting screw spacing, $1\frac{3}{8}$ inches.

2618	$101.80	Solid, Indicating	10	100	17

Double-Throw—10 Amps., 125 Volts; 10 Amps., 250 Volts

2 11/16" Porcelain Base; No. 2779 Flat Composition Handle Operating, Circuit 1, Off, Circuit 2, Off

Diameter of porcelain base, $2\frac{11}{16}$ inches.
Height over cover, $1\frac{29}{32}$ inches.
Height over handle, $2\frac{5}{8}$ inches.
Supporting screw spacing, $2\frac{1}{32}$ inches.

2613	$353.50	Solid, Indicating	1	10	5
2614	353.50	Slotted, Indicating	1	10	6

Standard finish on all metal covers of surface switches unless otherwise noted is polished nickel which will be supplied when finish is not specified.

Rotary switches can be converted into lock switches by removing the handles and substituting No. 2384 Universal Rotary Switch Lock Attachment.

Bryant 3 and 4-Point Surface Switches

With Metal Covers, Porcelain Bases, and Round Composition Handles

3-Point—3 Amps., 125 V.; 1 Amp., 250 V.

Diameter of base, 2 inches.
Height over cover, $1\frac{13}{32}$ inches.
Height over handle, $1\frac{15}{16}$ inches.
Supporting screw spacing, $1\frac{3}{8}$ inches.
No. 2455 can be supplied, on special order, at no advance in price, on a base $1\frac{3}{4}$ inches in diameter, which is the diameter of the metal cover.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Pkg.
2455	$67.88	Solid	10	100	27
2456	67.88	Slotted	10	100	26

3-Point—5 Amps., 125 V.; 3 Amps., 250 V.

Diameter of base, $2\frac{1}{4}$ inches.
Height over cover, $1\frac{13}{32}$ inches.
Height over handle, $1\frac{15}{16}$ inches.
Supporting screw spacing, $1\frac{1}{2}$ inches.

2175	$79.18	Solid	10	100	18
2027	79.18	Slotted	10	100	33

3-Point—10 Amps., 125 V.; 5 Amps., 250 V.

Diameter of base, $2\frac{7}{16}$ inches.
Height over cover, $1\frac{9}{16}$ inches.
Height over handle, $2\frac{1}{4}$ inches.
Supporting screw spacing, $1\frac{11}{16}$ inches.
No. 2176 can be supplied, on special order, at no advance in price, on a base $2\frac{1}{4}$ inches in diameter, which is the diameter of the metal cover.

2176	$118.22	Solid	10	50	18
2030	118.22	Slotted	10	50	18

4-Point—5 Amps., 125 V.; 2 Amps., 250V.

Four-point switches are used in connection with two 3-point switches where current is to be controlled from any one of more than two points. A 4-point switch is installed between the 3-point switches at each additional point.
Can also be used individually as pole-changing switches.
Diameter of base, $2\frac{7}{16}$ inches.
Height over cover, $1\frac{9}{16}$ inches.
Height over handle, $2\frac{1}{4}$ inches.
Supporting screw spacing, $1\frac{3}{4}$ inches.
No. 2183 can be supplied, on special order, at no advance in price, on a base $2\frac{1}{4}$ inches in diameter, which is the diameter of the metal cover.

2183	$254.52	Solid	10	30	11
2033	254.52	Slotted	10	30	19

Standard finish on metal covers is polished nickel which will be supplied when the finish is not specified.
Rotary switches can be converted into lock switches by removing the handles and substituting No. 2384 Universal Rotary Switch Lock Attachment.

Bryant Triple-Pole Surface Switches

With Metal Cover

10 Amperes, 125 Volts; 10 Amperes, 250 Volts

$2\frac{11}{16}$″ Porcelain Base; No. 2779 Wing Composition Handle

Diameter of base, $2\frac{11}{16}$ inches.
Height over cover, $1\frac{29}{32}$ inches.
Height over handle, $2\frac{5}{8}$ inches.
Supporting screw spacing, $2\frac{1}{32}$ inches.
Standard finish on metal covers unless otherwise noted is polished nickel which will be supplied when the finish is not specified.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Pkg.
2046	$311.08	Solid, Indicating	1	10	5
2634	311.08	Slotted, Indicating	1	10	5

Bryant Electrolier Surface Switches

With Metal Covers, Porcelain Bases, and Round Composition Handles

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

Diameter of base, $2\frac{7}{16}$ inches.
Height over cover, $1\frac{9}{16}$ inches.
Height over handle, $2\frac{1}{4}$ inches.
Supporting screw spacing, $1\frac{3}{4}$ inches.

2-Circuit, Operating 1, 2, 1 & 2, Off

First position, circuit 1 on; 2nd position, circuit 1 off and circuit 2 on; 3rd position, circuits 1 and 2 on; 4th position, all circuits off.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Pkg.
2216	$139.98	Solid	10	10	3
2215	139.98	Slotted	10	10	4
2188	155.54	Solid, Indicating	10	10	3
2074	155.54	Slotted, Indicating	10	10	4

3-Circuit, Operating 1, 1 & 2, 1 & 2 & 3, Off

First position, circuit 1 on; 2nd position, circuits 1 and 2 on; 3rd position, circuits 1 and 2 and 3 on; 4th position, all circuits off.

2187	$155.54	Solid, Indicating	10	10	4

Standard finish on metal covers is polished nickel and will be supplied when the finish is not specified.
Rotary switches can be converted into lock switches by removing the handles and substituting No. 2384 Universal Rotary Switch Lock Attachment.

Bryant 3-Speed Motor Control Switches

Operating 1, 2, 3, Off

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

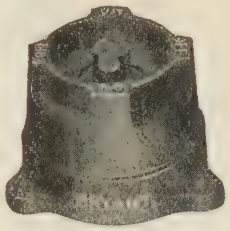
First position, circuit 1 on; 2nd position, circuit 1 off and circuit 2 on; 3rd position, circuits 1 and 2 off, circuit 3 on; 4th position, all circuits off.
Diameter of base, $2\frac{7}{16}$ inches.
Height over cover, $1\frac{9}{16}$ inches.
Height over handle, $2\frac{1}{4}$ inches.
Supporting screw spacing, $1\frac{3}{4}$ inches.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Pkg.
2666	$155.54	Solid, Indicating	10	10	4
2667	155.54	Slotted, Indicating	10	10	4

Bryant Reversible Triple-Pole Expulsion Type Surface Switches

For Inductive Loads

35 Amperes, 125 Volts; 20 Amperes, 250 Volts; 10 Amperes, 600 Volts 2 H.P. 3-Phase, 250-600 Volts



No. 781

For controlling 3-phase a.c. motors up to and including 2 h.p.
The switch mechanism has a composition base and handle which serves to indicate the position of the switch. Two covers are available: One is cast iron, lined, finished black, designed to be attached to conduit fittings made by The Crouse-Hinds Co., The Appleton Electric Co., The Columbia Metal Box Co., and the V. V. Fittings Co.; the other cover is stamped steel, finished black, with insulating lining.
The cast iron cover is dust-tight and ideal for use in flour and textile mills.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Pkg.
780	$349.96	Switch Only, No Cover	1	10	13
781	622.16	Switch with Black Cast Iron Cover, Indicating	1	10	40
782	388.86	Switch with Stamped Steel Cover, Indicating	1	10	16
783	272.20	Cover Only, Black, Cast Iron	1	10	31

Solid

Bryant Surface Switches

With Porcelain Bases, Covers and Handles

Rotary switches can be converted into lock switches by removing the handles and substituting No. 2384 Universal Rotary Switch Lock Attachment.

Single-Pole

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

Diameter base, 2 inches. Height over cover, 1 9/16 inches; over handle, 2 5/16 inches. Screw spacing, 1 3/8 inches.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2601	$45.24	Solid	1	100	41
2602	45.24	Slotted	1	100	40
2603	50.90	Solid, Indicating	1	100	41
2604	50.90	Slotted, Indicating	1	100	40

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

Diameter base, 2 1/2 inches. Height over cover, 1 5/8 inches; over handle, 2 3/8 inches. Screw spacing, 1 3/4 inches.

2435	$96.44	Solid, Indicating	1	30	16
2754	96.44	Slotted, Indicating	1	30	15

Double-Pole

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

Diameter base, 2 inches. Height over cover, 1 9/16 inches; over handle, 2 5/16 inches. Screw spacing, 1 3/8 inches.

2609	$105.76	Solid, Indicating	1	10	4
2610	105.76	Slotted, Indicating	1	10	4

10 Amperes, 125 Volts; 10 Amperes, 250 Volts

Diameter base, 2 1/2 inches. Height over cover, 1 5/8 inches; over handle, 2 3/8 inches. Screw spacing, 1 3/4 inches.

2438	$130.66	Solid, Indicating	1	10	5
2764	130.66	Slotted, Indicating	1	10	4

3-Point

5 Amperes, 125 Volts; 3 Amperes, 250 Volts

Diameter base, 2 inches. Height over cover, 1 9/16 inches; over handle, 2 5/16 inches. Screw spacing, 1 3/8 inches.

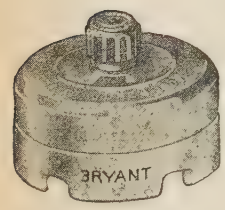
2605	$73.52	Solid	1	10	4
2606	73.52	Slotted	1	10	4

No. 2077 Bryant Expulsion Type Surface Switches

For Inductive Loads and Railway Circuits

Single-Pole, Fusible, with Porcelain Base, Cover and Handle

3 Amperes, 600 Volts



An open link fuse is laid in a groove near the edge of the cover.

Has No. 2781 porcelain handle.

Slotted, indicating base. Diameter, 3 3/8 inches.

Height over cover, 1 5/8 inches.

Height over handle, 2 3/8 inches.

Supporting screw spacing, 1 15/16 inches.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2077	$226.24	1	10	10

Bryant Expulsion Type Electric Railway Surface Switches

Single-Pole, Brown Porcelain Base, Cover, Handle

3 Amperes, 600 Volts

Connections for one enclosed fuse No. 2316.
Has No. 2782 brown porcelain handle.
Solid, indicating base, size 3 1/8x3 inches.
Height over cover, 1 23/32 inches; over handle, 2 1/2 inches.
Screw spacings, 3 1/8x5/8 in.

No. 2315

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2315	$230.28	1	25	37

Ferrule Type Cartridge Fuse

For use with No. 2315.
Enclosed, indicating base.
Length, 3 3/16 inches.
Diameter, 9/16 inch.

2316	$20.20	25	100	4

Bryant Expulsion Type Surface Switches

For Inductive Loads and Electric Railway Circuits With Metal Cover

No. 2773

Designed with barriers between parts of opposite polarity which are effective in limiting the arc formed when the circuit is broken.

The 600-volt rating only is N.E.C.S.

It is not advisable, though possible, to convert 600-volt switches to lock switches by the use of No. 2384 Universal Lock Attachment.

The window in the cover of indicating switches is located so that, when the switch is mounted on a wall above eye level, the indications can be read right side up under the handle.

Standard finish on metal covers is polished nickel which will be supplied when the finish is not specified.

Single-Pole

10 Amperes, 250 Volts; 5 Amperes, 600 Volts
2 7/16" Porcelain Base; No. 2781 Round Porcelain Handle

Height over cover, 1 9/16 inches; over handle, 2 5/16 inches.

Cat. No.	Per 100	Style Base	Screw Spacing In.	Carton	Std. Pkg.	Pkg. Wt. Lbs.
2049	$116.68	Solid, Indicating	1 3/4	1	50	20
2103	116.68	Slotted, Indicating	1 3/4	1	50	23

20 Amperes, 250 Volts; 10 Amperes, 600 Volts
3 1/32" Porcelain Base; No. 2784 Flat Porcelain Handle

Height over cover, 1 3/4 inches; over handle, 2 23/32 inches.

2060	$260.98	Solid, Indicating	2 3/16	1	50	38
2066	260.98	Slotted, Indicating	2 3/16	1	50	41

30 Amperes, 250 Volts; 20 Amperes, 600 Volts
3 9/16" Porcelain Base; No. 2784 Flat Porcelain Handle

Height over cover, 1 15/16 inches; over handle, 2 7/8 inches.

2303	$307.04	Solid, Indicating	2 3/16	1	50	53
2304	307.04	Slotted, Indicating	2 3/16	1	50	53

Double-Pole

10 Amperes, 250 Volts; 5 Amperes, 600 Volts
2 7/16" Porcelain Base; No. 2781 Round Porcelain Handle

Height over cover, 1 9/16 inches; over handle, 2 5/16 inches.

2773	$153.52	Solid, Indicating	1 3/4	1	50	25
2774	153.52	Slotted, Indicating	1 3/4	1	50	25

20 Amperes, 250 Volts; 10 Amperes, 600 Volts
3 1/32" Porcelain Base; No. 2784 Flat Porcelain Handle

Height over cover, 1 3/4 inches; over handle, 2 23/32 inches.

2447	$291.68	Solid, Indicating	2 3/16	1	50	43
2448	291.68	Slotted, Indicating	2 3/16	1	50	40

3-Point

10 Amperes, 250 Volts; 5 Amperes, 600 Volts
2 7/16" Porcelain Base; No. 2781 Round Porcelain Handle

Height over cover, 1 9/16 inches; over handle, 2 5/16 inches.

2179	$138.16	Solid	1 3/4	1	50	20
2100	138.16	Slotted	1 3/4	1	50	20
2413	153.52	Solid, Indicating	1 3/4	1	50	20
2414	153.52	Slotted, Indicating	1 3/4	1	50	21

20 Amperes, 250 Volts; 10 Amperes, 600 Volts
3 1/32" Porcelain Base; No. 2784 Flat Porcelain Handle

Height over cover, 1 3/4 inches; over handle, 2 23/32 inches.

2397	$260.98	Solid	2 3/16	1	50	40
2398	260.98	Slotted	2 3/16	1	50	40
2415	276.34	Solid, Indicating	2 3/16	1	50	40
2416	276.34	Slotted, Indicating	2 3/16	1	50	20

4-Point

20 Amperes, 250 Volts; 10 Amperes, 600 Volts
3 1/32" Porcelain Base; No. 2784 Flat Porcelain Handle

Height over cover; 1 3/4 inches; over handle, 2 23/32 inches.

2721	$276.34	Solid	2 3/16	10	20	16
2722	276.34	Slotted	2 3/16	10	20	16

2-Circuit, Operating 1, Off, 2, Off

20 Amperes, 250 Volts; 10 Amperes, 600 Volts
3 1/32" Porcelain Base; No. 2784 Flat Porcelain Handle

These switches will break the circuit without the use of an additional switch and are especially adapted for use on electric cars as headlight switches and to control the interior lights.

Height over cover, 1 3/4 inches; over handle, 2 23/32 inches.

2411	$276.34	Solid, Indicating	2 3/16	1	50	41
2412	276.34	Slotted, Indicating	2 3/16	1	50	36

Bryant Standard Heater Type and Standard Range Type Switches

3-Heat Switch

Surface heater switch, reversible rotation, with indicating handle.

Nickel silver angle cover with raised polished indications on japanned black background.

Solid base.

Single-Pole

Series-Parallel, 3-Heat—Operating High, Medium, Low, Off

Cat. No.	Per 100	Amperes 125 Volts	Amperes 250 Volts	Base Diam. Inches	Mounting Screw Centers Inches	Carton	Std. Pkg.	Pkg. Wt. Lbs.
6249	$160.00	6	3	2 1/32	1 7/16 to 1 1/2	1	10	4
6259	180.00	10	5	2 3/16	1 7/16 to 1 1/2	1	10	4
6269	200.00	15	7 1/2	2 1/2	1 21/32 to 1 3/4	1	10	6
6279	220.00	20	10	2 13/16	1 21/32 to 1 3/4	1	10	8
6289	320.00	30	15	3 5/16	2 1/16 to 2 3/16	1	10	13
6299	400.00	36	18	3 5/8	2 5/8 to 2 3/4	1	10	19
6209	500.00	42	21	4	2 5/8 to 2 3/4	1	10	..

Operating On and Off

6247	$120.00	6	3	2 1/32	1 7/16 to 1 1/2	1	10	4
6257	160.00	10	5	2 3/16	1 7/16 to 1 1/2	1	10	4
6267	180.00	15	7 1/2	2 1/2	1 21/32 to 1 3/4	1	10	6
6277	220.00	20	10	2 13/16	1 21/32 to 1 3/4	1	10	7
6287	300.00	30	15	3 5/16	2 1/16 to 2 3/16	1	10	14
6269	200.00	36	18	3 5/8	2 5/8 to 2 3/4	1	10	6
6207	440.00	42	21	4	2 5/8 to 2 3/4	1	10	19

Double-Pole

Series Parallel, 3-Heat—Operating High, Medium, Low, Off

6258	$145.92	10	5	2 3/16	1 7/16 to 1 1/2	1	10	5
6278	260.00	20	10	2 13/16	1 21/32 to 1 3/4	1	10	8
6288	360.00	30	15	3 3/16	2 1/16 to 2 3/16	1	10	13
6298	520.00	36	18	3 5/8	2 5/8 to 2 3/4	1	10	17
6208	620.00	42	21	4	2 5/8 to 2 3/4	1	10	19

Operating On and Off

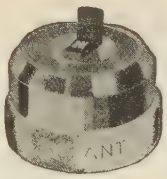
6246	$160.00	6	3	2 1/32	1 7/16 to 1 1/2	1	10	5
6256	180.00	10	5	2 3/16	1 7/16 to 1 1/2	1	10	4
6266	200.00	15	7 1/2	2 1/2	1 21/32 to 1 3/4	1	10	6
6276	220.00	20	10	2 13/16	1 21/32 to 1 3/4	1	10	7
6286	320.00	30	15	3 5/16	2 1/16 to 2 3/16	1	10	7
6296	400.00	36	18	3 5/8	2 5/8 to 2 3/4	1	10	17
6206	500.00	42	21	4	2 5/8 to 2 3/4	1	10	19

These switches can be furnished with flat top covers instead of angle covers at the same prices. Specify by changing the second digit of the catalogue number from 2 to 3. Viz. No. 6349—instead of No. 6249, etc.

Bryant Surface Tumbler Switches

125-250 Volts

With Metal Cover



No. 3911

Diameter of base, 2 7/16 inches.
Height over cover, 1 1/2 inches.
Height over handle, 2 inches.
Supporting screw spacing, 1 3/4 inches.
Standard finish on metal covers is polished nickel. Covers in other finishes, except silver and gold, can be furnished on special order.

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
3911	$84.00	S. P., Indicating....	10	5	10	100	37
3912	118.22	D. P., Indicating...	10	10	10	100	39
3913	118.22	3-Point.....	10	5	10	50	18
3914	295.52	4-Point.....	10	5	2	10	4

With Brown Bakelite Covers

Diameter of base, 2 7/16 inches.
Height over cover, 1 9/16 inches; over handle, 2 inches.
Supporting screw spacing, 1 3/4 inches.

3911-B	$84.00	S. P., Indicating....	10	5	10	100	37
3912-B	118.22	D. P., Indicating...	10	10	10	100	39
3913-B	118.22	3-Point.....	10	5	10	50	18
3914-B	295.52	4-Point.....	10	5	2	10	4

Hemco Switches

With Templus Cover

Surface Switches

No. H21

Diameter of base, 2 inches.
Height over cover, 1 7/16 inches.
Height over handle, 1 13/16 inches.
Screw spacing, 1 3/8 inches.
Carton, 10. Standard package, 50.

Cat. No	Per 100	Description	Wt., Lbs. Std. Pkg.
H21	$15.78	Single-Pole.....	11
H23	31.58	3-Point.....	11

For Outlet Boxes

No. H31

Carton, 10. Standard package, 50.

For 3 1/4-Inch Box

H31	$23.16	Single-Pole.....	26
H33	37.90	3-Point.....	26

For 4-Inch Box

H41	$25.26	Single-Pole.....	34
H43	40.00	3-Point.....	30

Hemco Pendent Switches

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

For kitchen lighting units which are placed out of reach. Takes any standard parallel or tandem blade attachment plug cap.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
H9081	$60.60	10	50	9

Bryant Porcelain Sub-Bases

No. 2383 or 2222

For devices whose bases are 2 5/16 inches in maximum diameter to 1 7/8 inches minimum diameter and having screw spacings from 3/4 to 1 3/8 inches.
Carton, 10. Standard package, 100.

Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
2381	$8.42	For Surface Work.....	19
2383	8.42	For Molding Work.....	19

No. 2381 or 2357

For devices whose bases are 2 5/8 inches in maximum diameter to 2 1/4 inches minimum diameter and having screw spacings from 3/4 to 1 3/4 inches.
Carton, 10. Standard package, 100.

2357	$8.42	For Surface Work...	33
2222	8.42	For Molding Work..	26

Bryant Pull Switches

Ceiling Type

Each switch is supplied with short chain and connector and 8 feet of heavy cord and large black composition ball.

Standard finish on metal covers is polished nickel which will be supplied when the finish is not specified.

Wall Type

Ceiling Type with Porcelain Bases and Templus Covers

Non-Indicating

Diameter of base, 2 9/16 inches. Height over cover, 2 1/8 inches. Supporting screw spacing, 1 3/4 inches.

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt., Lbs.
2387	$155.54	Single-Pole, Solid...	10	5	10	30	15
2309	155.54	Single-Pole, Slotted.	10	5	10	30	15
2396	183.54	Double-Pole, Solid..	10	10	10	10	5
2314	183.54	Double-Pole, Slotted	10	10	10	10	5
2388	199.10	3-Point, Solid.....	10	5	10	10	5
2310	199.10	3-Point, Slotted.....	10	5	10	10	5
2389	376.40	4-Point, Solid.....	5	2	1	10	5
2311	376.40	4-Point, Slotted.....	5	2	1	10	27
Electrolier, 2 Circuit, Operating 1, 2, 1 and 2 Off							
2390	$220.86	Solid.....	10	5	1	10	8
Electrolier, 3-Circuit, Operating 1, 1 & 2, 1 & 2 & 3, Off							
2395	$220.86	Solid.....	10	5	1	10	8
3-Speed Motor Control, Operating 1, 2, 3, Off							

Diameter of base, 2 1/4 inches. Diameter of cover, 2 1/4 inches. Height over cover, 2 1/8 inches.

Supporting screw spacing, 1 5/8 inches.

2863	$220.86	Solid.....	10	5	10	10	5
For 3 1/4 and 4-Inch Outlet Boxes							

Diameter of base, 4 5/8 inches.

Supporting screw spacings, 2 3/4 and 3 1/2 inches.

2769	$194.42	Single-Pole.....	10	5	1	10	12
2770	222.42	Double-Pole.....	10	10	1	10	13

Ceiling Type with Porcelain Bases and Bakelite Covers

Non-Indicating, with Cadmium-Plated Covers For 3 1/4-Inch Outlet Boxes

Diameter of cover, 3 1/2 inches. Height of cover, 1 1/2 inches. Screw spacing, 2 3/4 inches. Porcelain base, 2 1/4 inches in diameter, extends 9/16 inch below box cover.

4331	$163.32	Single-Pole.....	10	5	10	30	6
4332	191.32	Double-Pole.....	10	10	10	30	6
4333	206.86	3-Point.....	10	5	10	10	6
4334	384.18	4-Point.....	5	2	1	10	6
For 4-Inch Outlet Boxes							

Diameter of cover, 4 3/8 inches. Height of cover, 1 1/2 inches. Screw spacing, 3 3/8 inches. Porcelain base, 2 1/4 inches in diameter, extends 9/16 inch below box cover.

4341	$166.42	Single-Pole.....	10	5	10	30	8
4342	194.42	Double-Pole.....	10	10	10	30	8
4343	209.98	3-Point.....	10	5	10	10	8
4344	387.30	4-Point.....	5	2	1	10	8

Wall Type with Porcelain Bases and Metal Covers

Non-Indicating

Diameter of base, 2 9/16 inches. Height over cover, 2 1/8 inches. Supporting screw spacing, 1 3/4 inches.

2546	$155.54	Single-Pole, Solid...	10	5	10	30	16
2547	155.54	Single-Pole, Slotted.	10	5	10	30	15
2565	183.54	Double-Pole, Solid..	10	10	10	10	5
2566	183.54	Double-Pole, Slotted	10	10	10	10	5
2549	199.10	3-Point, Slotted.....	10	5	10	10	5
2560	376.40	4-Point, Slotted.....	5	2	1	10	5

Bryant Type T Pendent and Cord Switches

With Metal Shells

6 Amperes, 125 Volts
3 Amperes, 250 Volts

Single-Pole

Push-Through Buttons

No. 2572

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt., Lbs.
2572	$58.88	Pendent Cap...	10	100	15
2574	93.32	3/8-Inch Cap....	10	100	16
2 Buttons on Bottom Small Pattern					

No. 2370

2370	$77.78	Pendent Cap...	10	100	28
2270	93.32	3/8-Inch Cap....	10	100	27

Straight-Through Switch, Single-Pole
Push-Through Buttons

Similar in appearance to No. 2572.

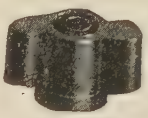
2592	$42.42	13/32-Inch Cord Holes.....	10	50	7

Bryant Rotary Switch Handles

No. 2781

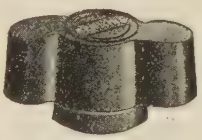
All Bryant Rotary Switch Handles, lock attachments, and switch center posts, except heater and reversible switches, are threaded alike, regardless of the size of the switch. The handles differ in external shape and size for purposes of leverage appropriate to the size of the switch.

In an emergency, any available handle can be attached to any switch. The list below shows in a general way what handles are suitable for various sizes of switches. Refer to the switch lists for definite information regarding handles.



No. 2779

Round, White Porcelain



No. 2780

Cat. No.	Per 100	Size Switch in Amps. 125 and 250 Volts	250 and 600 Volts	Std. Pkg.
2781	$12.00	3, 5, 10	3, 5	100
Flat, Composition				
2779	$12.00	20	....	100
2780	12.00	30	....	100

Any switch, regularly equipped with any of the handles listed above, can be supplied, on special order, with any other of the handles listed without extra charge.

Bryant Heater Switch Handles

Porcelain Indicating Handles for Nos. 6200 and 6300 Lines of Reversible Switches

No. 6201

No. 6203

Cat. No.	Per 100	For Switch Nos.	Std. Pkg.
6201	$22.80	6249, 6258, 6259, 6269, 6247, 6257, 6267, 6246, 6256, 6266.....	100
6202	22.80	6279, 6278, 6277, 6276.....	100
6203	22.80	6289, 6288, 6287, 6286.....	100
6204	22.80	6299, 6209, 6298, 6208, 6297, 6207, 6296, 6206.....	100

Bryant Lock Attachments and Keys

Universal Rotary Switch Lock Attachment and Key

No. 2384

By substituting this lock attachment for the handle on any Bryant Rotary Switch, except heater and reversible switches, lock switches are obtained. Of polished nickel.

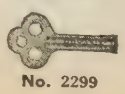
The key is used to operate the switch through the lock attachment and also to install or remove the lock attachment.

No. 2126

Cat. No.	Per 100	Description	Std. Pkg.
2384	$22.62	Lock Attachment.....	100
2126	14.14	Key for Rotary Lock Switch.....	100

Keys for Tumbler and Push Lock Switches

No. 3950



No. 2299

One of these keys is furnished without charge with each lock switch.

3950	$14.14	For Tumbler Lock Switch	100
2299	14.14	For All Push Lock Switches	100

Bryant Type O Pull and Push Switches

Nos. 2473 and 2480

Nos. 2417, 2421 and 2440

With Metal Shells
10 Amperes, 125 Volts
5 Amperes, 250 Volts

Standard finish is brush brass which will be furnished when no finish is specified.

Pull

Single-Pole

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2473	$183.82	⅜-Inch Cap...	10	30	12
		Electrolier and Motor Control			
2476	$183.82	2-Circuit, 1, 2, 1 and 2 Off....	10	10	5
2480	183.82	3-Speed, 1, 2, 3, Off.....	10	10	4

Push

Single-Pole

2440	$169.68	Pendent Cap...	10	30	12
		Double-Pole			
2421	$169.68	Pendent Cap...	10	10	3
		3-Point			
2417	$169.68	Pendent Cap...	10	10	3

No. 2842 Bryant Canopy Pull Switches

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

Each switch is provided with two washers for mounting in outlet boxes.

Furnished with short chain and 4 feet of cord.

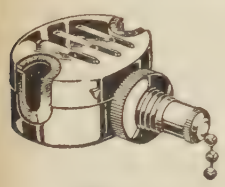
Stem, 13/32 inch long.

Has brown bakelite body, brass shell, and screw terminals.

Standard finish of exposed parts is brush brass which will be furnished when no finish is specified. Flash silver, bronze, or black, when specified, will be furnished without additional charge.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt. Lbs. Std. Pkg.
2842	$70.00	10	100	17

Levolier Conduit Box and Fixture Switches



No. 41

Nos. 41-43 Thin Model
6 Amperes

Particularly adaptable to the modern type of ceiling canopy. Easily and quickly installed.

All switches except No. 41-PL are equipped with 8-foot cord, connector and brass bell.

Standard finishes are brass and Jap bronze; special finishes may be had by order.

Diameter of stem, 7/16-inch.

In cartons of 10; standard package, 100.

Cat. No.	41	*41-PL	42	43
Each	$.80	.74	.82	.82
Length of Stem...inches	3/16	3/16	3/8	3/4
Weight, Standard Package..pounds	12	9	12	13

*PL—plain lever without chain.

No. 39 Thin Model
6 Amperes

Can be used on any chain fixture and between any two links, without renewing or changing fixture length.

Carton, 10. Standard package, 100; weight, 16 pounds.

No. **39**, Brass and Jap Bronze Finishes. .....each **$.80**

Bryant Flush Tumbler Switches

Porcelain Cups, Brown Composition Handles With Plaster Ears

No. 3951

Dimensions of porcelain cups: Length, 2 9/16 inches; width, Nos. 3951 and 3951-L, 1½ inches, others 1 11/16 inches; depth, 1 3/32 inches.

Supporting screw spacing, 3 3/32 inches.

Screws for mounting are furnished.

One key is furnished with each lock switch.

When ordering combination plates, specify S sections to accommodate these switches.

These switches, on special order, can be furnished with black handles (lock switches with black bosses) without extra charge.

Flush Tumbler Switches

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
3951	$32.00	S. P. Indicating.....	10	5	10	100	31
3952	84.00	D. P. Indicating....	10	10	10	50	17
3953	50.00	3-Point.....	10	5	10	50	17
3954	280.00	4-Point.....	5	2	10	10	3
3955	113.12	D. P. Indicating....	20	10	10	10	3
3920	84.00	S. P. Quadruple Break, Indicating.	20	10	10	50	16

Flush Tumbler Lock Switches

3951-L	$112.28	S. P. Indicating.....	10	5	10	100	31
3952-L	147.00	D. P. Indicating....	10	10	10	50	17
3953-L	133.48	3-Point.....	10	5	10	50	17
3954-L	345.80	4-Point.....	5	2	10	10	3
3955-L	176.12	D. P. Indicating....	20	10	10	10	3
3920-L	147.00	S. P. Quadruple Break, Indicating.	20	10	10	50	16

Bryant High Capacity Flush Tumbler Switches

For Industrial Applications
20 Amperes, 250 Volts

Will operate successfully and without failure at full load and voltage for many times beyond accepted standard.

No. 3972

Porcelain Cups

Front Connected

2 H.P.—230 Volts A.C., 250 Volts D.C.

Particularly designed for motor control.

Double-Pole Indicating, Templus Handle

No. 3972-SH

Cat. No.	Per 100	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
3972	$113.12	20	10	2	10	5½
	Double-Pole, Steel Handle					
3972-SH	$113.12	20	10	2	10	5½
	Double-Pole, Roller Handle					
3972-SR	$118.12	20	10	2	10	5½

Porcelain Cups

Back Connected

2 H.P.—230 Volts A.C., 250 Volts D.C.

Particularly designed for the control of appliances such as heaters and other high wattage devices. At 125 volts wattages up to 2500 may be safely controlled; at 250 volts wattages up to 5000.

No. 3972-SR

	Double-Pole Indicating, Composition Handle					
3982	$113.12	20	20	2	10	6
	Single-Pole					
3971	$84.00	20	10	10	50	20
	3-Point					
3973	$339.36	20	10	10	2	7

Bryant Enclosed Flush Tumbler Switches

For Type C Lamp Loads
Black Composition Cups

No. 4961

These switches will give uniform performance, high minimum break-down, and exceptionally long life.

Dimensions of cups: Length, $2^{11}/_{16}$ inches; depth, $1^{3}/_{8}$ inches; width, Nos. 4961 and 4961-L, $1^{13}/_{32}$ inches, others, $1^{11}/_{16}$ inches.

Supporting screw spacing, $3^{9}/_{32}$ inches.

When ordering combination plates, specify S section. Single plates OS11, OS61, HS41, and HS31.

On special order, these switches can be furnished with black handles (lock switches with black bosses) without extra charge.

Flush Tumbler Switches
With Brown Bakelite Handles

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
4961	$77.78	S.P. Indicating....	10	5	10	50	17
4962	127.26	D.P. Indicating...	10	10	10	10	4
4963	98.98	3-Point.....	10	5	10	20	8
4964	311.08	4-Point.....	5	2	10	10	4
4965	141.40	D.P.Indicating....	20	10	10	10	4
4966	127.26	S.P. Quadruple Break, Indicating.	20	10	10	20	8

Flush Tumbler Lock Switches
With Brown Bakelite Bosses

One No. 4960 Key is furnished with each lock switch.

4961-L	$140.78	S.P. Indicating...	10	5	10	50	19
4962-L	190.26	D.P. Indicating..	10	10	10	10	4
4963-L	161.98	3-Point.....	10	5	10	20	8
4964-L	374.08	4-Point.....	5	2	10	10	4
4965-L	204.40	D.P. Indicating..	20	10	10	10	4
4966-L	190.26	S.P. Quadruple Break, Indicating	20	10	10	20	8

Bryant Interchangeable Line Switches

Single Switch

Fully enclosed mechanism.

Satisfactory on Type C lamp circuits.

Fits standard brass and composition plates.

Generous wiring room.

Different switch combinations in 2 or 3-lever arrangements.

Electrically connected combinations in one base ready for installation.

Single switches and electrically connected combinations can be supplied in lock type when specified. Add L to Cat. No. and $63.00 per 100 to list for each switch in combination.

IL Single Switches

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
IL61	$32.00	Single-Pole.....	10	5	10	100	20
IL62	84.00	Double-Pole.....	..	10	2	10	$2^{1}/_{2}$
IL63	50.00	3-Point.....	10	5	10	50	$10^{1}/_{2}$
IL64	280.00	4-Point.....	5	2	2	10	$2^{1}/_{2}$

Electrically Connected Combinations

IL611	$64.00	2 Single-Pole.....	..	..	2	10	3
IL613	82.00	1 Single-Pole, 1 3-Point..	..	..	2	10	3
IL633	100.00	2 3-Point.....	..	..	2	10	3
IL6111	96.00	3 Single-Pole.....	..	..	2	10	3
IL6113	114.00	2 Single-Pole, 1 3-Point..	..	..	2	10	3

Each unit in combination rated same as corresponding single switch. Any combination can be supplied in two or three sections. Order by using single switch numbers in the order of combination wished. List price is the sum of the lists of switch sections. Regularly supplied with common feed. For separate feed, remove the shunt connection.

Templus Plates for Connected Combinations

IL12	$15.00	1 Gang, 2 Openings..	..	..	10	50	5
IL13	21.00	1 Gang, 3 Openings..	..	..	5	25	2
IL24	30.00	2 Gangs, 4 Openings.	..	..	5	25	2
IL26	42.00	2 Gangs, 6 Openings.	..	..	2	20	2

Bryant Flush Tumbler Switches

Single-Pole and 3-Point: 6 Amps., 125 V.; 3 Amps., 250V.
Double-Pole: 10 Amps., 125 V.; 5 Amps., 250 V.
4 Point: 5 Amps., 125 V.; 2 Amps., 250 V.

One outlet box, one switch, and one single gang plate in place of two or three of each.

Switch mechanisms operate horizontally.

Single and double-pole units indicating.

Brown bakelite cups and handles. Black bakelite handles on special order without extra charge.

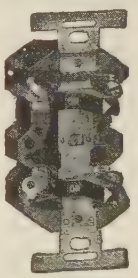
Dimensions of bakelite cups: Length, $2^{13}/_{16}$ inches; width, $1^{3}/_{4}$ inches; depth, $1^{7}/_{32}$ inches.

Supporting screw spacings, $3^{9}/_{32}$ inches.

Carton, 2. Standard package, 10.

No. 2853 Unigle

No. 2894 Dugle


No. 2892 Dugle

No. 2860 Trigle

Unigle Switches
One Mechanism Mounted In Center Position of Cup

Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
2851	$70.70	Single-Pole.....	2
2852	98.98	Double-Pole.....	2
2853	84.84	3-Point.....	2
2854	282.80	4-Point.....	2

Dugle Switches Separate Feeds
Two Mechanism Mounted In End Positions of Cup

2855	$353.50	1 Single-Pole, 1 4-Point	3
2856	197.96	2 Double-Pole.....	3
2857	367.64	1 3-Point and 1 4-Point	3
2858	183.82	1 Double-Pole, 1 3-Point.....	3
2859	381.78	1 Double-Pole, 1 4-Point.....	3
2869	169.68	1 Single-Pole, 1 Double-Pole.....	3
2893	148.48	2 3-Point.....	3
2894	120.20	2 Single-Pole.....	3
2895	134.34	1 Single-Pole, 1 3-Point.....	3

Dugle Switches Common Feed
Two Mechanisms Mounted In End Positions of Cup

2891	$148.48	2 3-Point.....	3
2892	120.20	2 Single-Pole.....	3
2896	134.34	1 Single-Pole, 1 3-Point	3

Trigle Switches Separate Feeds

2864	$183.82	3 Single-Pole.....	3
2866	197.96	2 Single-Pole, 1 3-Point	3
2867	240.38	2 Single-Pole, 1 Double-Pole.....	3
2868	424.20	2 Single-Pole, 1 4-Point	3

Trigle Switches Common Feed

2860	$183.82	3 Single-Pole.....	3
2865	197.96	2 Single-Pole, 1 3-Point	3

When ordering combination plates for regular switches specify S1 for Unigle, S2 for Dugle, and S3 for Trigle, and for Lock Type Switches, S4 for Unigle, S5 for Dugle, and S6 for Trigle Sections.

These switches can be furnished with Lock Type mechanism at an addition to list price of $45.00 per 100 units. Add L to Cat. No. When so ordered, all units in the switch will be supplied Lock unless otherwise specified. A special plate is necessary when lock and regular units are combined in a switch.

One No. 2850 Key is furnished without charge with each lock switch. Sold separately at $14.14 per 100 list. Carton, 20. Standard package, 100.

Bryant Brass Flush Plates

For Regular and Lock Type Unigle, Dugle, and Trigle Flush Tumbler Switches

No. OS311

No. OS661

The standard finish is brush brass and will be furnished when no finish is specified.

Mounting screw holes are spaced 2⅜ inches on centers.

Unigle Switch Plates, Symbol S1

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
OS111	$52.64	Solid, .100-Inch Brass.....	2	10	5
OS141	19.80	Stamped, .040-Inch Brass..	2	10	2
OS161	25.46	Stamped, .060-Inch Brass..	2	10	2

Unigle Lock Type Switch Plates, Symbol S4

OS411	$52.64	Solid, .100-Inch Brass.....	2	10	5
OS441	19.80	Stamped, .040-Inch Brass..	2	10	2
OS461	25.46	Stamped, .060-Inch Brass..	2	10	2

Dugle Switch Plates, Symbol S2

OS211	$52.64	Solid, .100-Inch Brass.....	2	10	5
OS241	19.80	Stamped, .040-Inch Brass..	2	10	2
OS261	25.46	Stamped, .060-Inch Brass..	2	10	2

Dugle Lock Type Switch Plates, Symbol S5

OS511	$52.64	Solid, .100-Inch Brass.....	2	10	5
OS541	19.80	Stamped, .040-Inch Brass..	2	10	2
OS561	25.46	Stamped, .060-Inch Brass..	2	10	2

Trigle Switch Plates, Symbol S3

OS311	$52.64	Solid, .100-Inch Brass.....	2	10	5
OS341	22.58	Stamped, .040-Inch Brass..	2	10	2
OS361	25.46	Stamped, .060-Inch Brass..	2	10	2

Trigle Lock Type Switch Plates, Symbol S6

OS611	$52.64	Solid, .100-Inch Brass.....	2	10	5
OS641	19.80	Stamped, .040-Inch Brass..	2	10	2
OS661	25.46	Stamped, .060-Inch Brass..	2	10	2

Hemco Flush Plates

For Regular and Lock Type Unigle, Dugle, and Trigle Flush Tumbler Switches

No. HS331

No. HS631

Brown Hemco bakelite plates with glossy ribbed surface, and rich, satin finish border.

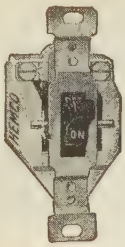
Will not fade or warp.

Unigle Switch Plates

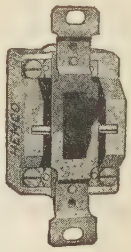
Cat. No.	Per 100	Description	Symbol	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
HS131	$17.12	Regular Type.....	S1	2	10	2
HS431	17.12	Lock Type.....	S4	2	10	2
Dugle Switch Plates						
HS231	$17.12	Regular Type.....	S2	2	10	2
HS531	17.12	Lock Type.....	S5	2	10	2
Trigle Switch Plates						
HS331	$21.00	Regular Type.....	S3	2	10	2
HS631	21.00	Lock Type.....	S6	2	10	2

Hemco Flush Tumbler Switches

10 Amperes 125 Volts—5 Amperes, 250 Volts



No. H51



No. H53

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
H51	$13.68	Single-Pole, Indicating.....	10	100	30
H53	26.32	3-Point.....	10	50	14

No. HS-31

No. HP-31

No. HF-31

No. HV-31

Hemco Flush Plates

Brown Molded Templus, with Metal Screws

Ribbed

Cat. No.	Per 100	No. of Gangs	Style Switch	Carton	Std. Pkg.	Pkg. Wt. Lbs.
HS31	$8.42	1	Tumbler	10	100	9
HS32	16.84	2	Tumbler	5	50	9
HS33	25.26	3	Tumbler	3	30	8
HP31	8.42	1	Push	10	100	10
HP32	16.84	2	Push	5	50	8
HP33	25.26	3	Push	3	30	9
HF31	8.42	1	Single Rec.	10	100	9
HV31	8.42	1	Duplex Rec.	10	100	7

Stamped Brass, .040-Inch Thick

Cat. No.	Per 100 Brush Brass	Per 100 Perma Finish	No. Gangs	Style Switch	Carton	Std. Pkg.	Pkg. Wt., Lbs.
HS41	$12.00	$10.50	1	Tumbler	10	100	17
HS42	24.00	21.00	2	Tumbler	5	50	14
HS43	36.30	31.56	3	Tumbler	3	30	12
HP41	12.00	10.50	1	Push	10	100	14
HP42	24.00	21.00	2	Push	5	50	14
HP43	36.30	31.56	3	Push	3	30	15
HF41	12.00	12.00	1	Single	10	100	16
HV41	10.50	10.50	1	Duplex	10	100	15

Bryant Brass Plates for 12-Volt Bell Push Button

Symbol T

Button is not furnished.

Diameter of center hole, ⅝ inch.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
OT11	$52.64	1-Gang, Solid	10	50	20

GraybaR QUALITY SINCE 1896
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

Bryant Flush Plates for Tumbler Switches

Schedule H

1-Gang

2-Gang

The standard finish is brush brass which will be furnished when no finish is specified.

Perma finish is a durable colored lacquer that resembles brush brass.

S plates of the same material may be assorted in various finishes, thicknesses and gangs to make up carton and standard package quantities. No other assortment permitted.

When ordering combination plates, specify S section to accommodate switches with handles operating vertically.

By installing No. 746 jewel, any of these plates can be made into pilot light plates.

Brass mounting screws, finished to match, are packed in the carton with each plate.

Solid Brass Plates, One Horizontal Row
Symbol S

Description	Carton Gangs	Std. Pkg. Gangs	Pkg. Wt. Lbs.	Standard Finish Cat. No.	Standard Finish Per 100	Perma Finish Cat. No.	Perma Finish Per 100
1-Gang	10	100	24	OS11	$52.64	OS11-P	$51.06
2-Gang	10	100	19	OS12	105.28	OS12-P	102.12
3-Gang	10	100	17	OS13	157.92	OS13-P	153.18

The price of brush brass solid S plates above 3 gangs, when dimensions and spacings are standard, is 84 cents list per gang (Perma, 76 cents).

Stamped Brass Plates, .060-Inch
One Horizontal Row, Symbol S

1-Gang	10	100	25	OS61	$22.10	OS61-P	$20.52
2-Gang	10	100	21	OS62	44.20	OS62-P	41.04
3-Gang	10	100	20	OS63	66.30	OS63-P	61.56

The price of brush brass .060-inch S plates above 3 gangs, when dimensions and spacings are standard, is 52 cents list per gang (Perma, 44 cents).

Stamped Brass Plates, .040-Inch
One Horizontal Row, Symbol S

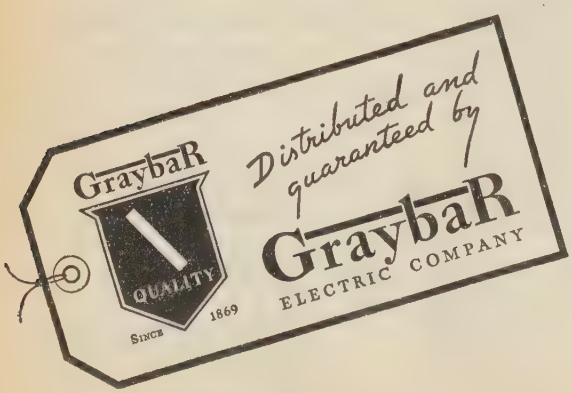
1-Gang	10	100	19	OS41	$12.00	OS41-P	$10.50
2-Gang	10	100	15	OS42	24.00	OS42-P	21.00
3-Gang	10	100	14	OS43	36.30	OS43-P	31.56

The price of brush brass .040-inch S plates above 3 gangs, when dimensions and spacings are standard, is 44 cents list per gang (Perma, 36 cents).

Solid Brass Plates, One Vertical Row (Tandem)

2-Gang	10	100	22	3792	$142.82	3792-P	$131.50
3-Gang	10	100	22	3793	214.22	3793-P	197.26

The price of brush brass solid S plates in one vertical row (tandem) above 3 gangs, when dimensions and spacings are standard, is 84 cents list per gang (Perma, 76 cents).



Bryant Flush Plates

Explanation of Catalogue Numbers for Flush Plates

When specifying flush plates there are three things that must be known:

1. The style of plate.
2. The material of which it is made.
3. The number of gangs.

Except for tandem plates (plates arranged vertically) and combination plates, each listed Bryant flush plate has a catalogue number which describes the kind of plate it is.

OP52 is the catalogue number for a 2-button push switch plate, Templus composition, 2-gang.

OV61 is the catalogue number for a duplex flush receptacle plate, .060-inch stamped brass, 1-gang.

OPF42 is the catalogue number for a plate for one 2-button push switch and a single flush receptacle, .040-inch stamped brass, 2-gang.

OV211 is the catalogue number for a plate with doors for a duplex flush receptacle, solid brass, 1-gang.

In each case the left-hand letter O indicates a flush plate. See examples.

I. The symbol letter or letters immediately following describe the style of plate. See examples, letters P, V, PF and V2.

II. The figure next to the right-hand figure indicates the material of which the plate is made.

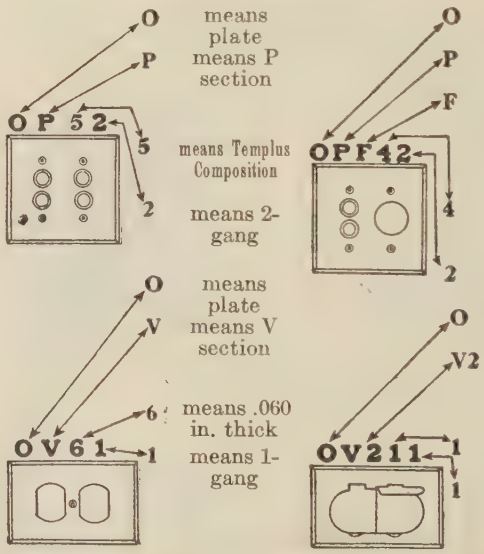
1. Indicates brass, .100 inch thick (solid).
6. Indicates brass, .060 inch thick, stamped.
5. Indicates Templus moulded composition.
4. Indicates brass, .040 inch thick, stamped.
7. Indicates De Luxe wood inlay plates.
3. Indicates Hemco bakelite plates. In this case H is substituted for the first letter O.

—B used in conjunction with No. 7 indicates the all metal plate of the De Luxe type.
—P after any plate catalogue number indicates that Perma finish is desired.

III. The right-hand figure indicates the number of horizontal gangs wide.

When the simple elements of this number system are learned it will be found easy to specify Bryant plates by catalogue number.

Examples



NOTE.—Plates in combinations exceeding 8 gangs cannot be furnished in .060-inch or .040-inch. Combination plates can only be furnished in the thickness specified with each section.

Bryant Special Finishes

GENERAL.—The standard finish of all brass shell devices and brass flush plates, unless otherwise noted, is brush brass, which will be supplied when the finish is not specified. Standard and special finishes on all devices of one catalogue number may be assorted to make up the standard package quantity, which will be the same as though all were standard finish.

Assortment of catalogue numbers may be made only as indicated in the catalogue pages where the devices are listed. Prices on all special finishes other than those listed, including gold, will be quoted on application.

Sample of finish desired should always be submitted to avoid mistakes and delays.

Socket Type Devices

QUANTITY DISCOUNTS.—When socket type devices or metal covered attachment plug caps in special finishes are ordered in quantities the list prices for finishes only will be reduced as follows: lots of 250–499, one shipment, one finish, 10%; lots of 500–999, one shipment, one finish, 20%; lots of 1000 or over, one shipment, one finish, 50%. For mogul sockets in special finishes, add double the prices which apply to standard sockets.

CHAINS AND METAL CHAIN PARTS.—Chain guides, per foot or cut in lengths not longer than 1 foot, and chain parts, singly or in combination, can be supplied in any special finish, except silver and gold, at an addition to list price of 4 cents per unit. For silver finishes add 20 cents list per unit. Gold finish prices on application.

Surface Switch Covers

The standard finish on all metal covers of surface switches unless otherwise noted is polished nickel, which will be supplied when the finish is not specified. For covers in any other finish, except silver or gold, add to list 20 cents each. Silver or gold finish prices on application.

	ADD TO LIST PER 100									
	Brass Shell Key, Keyless and Push Devices with Caps including Pendent Switches Complete	Brass Shell Pull Devices with Caps Complete	Brass Shell Key, Keyless and Push Bodies, all Shade-Holders	Brass Shell Pull Bodies	Brass Shell Socket Caps, Brass-Mounted Porcelain Socket Caps and Canopy Switch Nuts and Knob Handles	One-Piece Brass Shell Wall and Ceiling Sockets and Receptacles and "New Wrinkle" Bases	METAL COVERED ATTACHMENT PLUG CAPS AND FLUSH RECEPTACLE PLUGS 10 Ampere Caps	20 and 25 Ampere Caps	BRASS FLUSH PLATES Single Gang per 100	per 100 *Each Add'l Gang
Finish										
Barff, Bauer Imitation (Lacquer)	$6.00	$8.00	$3.00	$5.00	$3.00	$12.00	$4.00	$8.00	$14.00	$14.00
Brass, Sand Blast Antique	22.00	24.00	11.00	13.00	11.00	30.00	12.00	25.00	42.00	14.00
Brass, Sand Blast Brush	16.00	20.00	9.00	11.00	9.00	28.00	8.00	16.00	35.00	14.00
Brass, Flemish	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Brass, Lemon	6.00	8.00	3.00	5.00	3.00	12.00	4.00	8.00	14.00	14.00
Brass, Oxidized	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Brass, Polished	6.00	8.00	3.00	5.00	3.00	12.00	4.00	8.00	14.00	14.00
Bronze, Brush	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Bronze, Japanese (Dark)	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Bronze, Polished	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Bronze, Statuary (Light)	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Black Lacquer	6.00	8.00	3.00	5.00	3.00	12.00	4.00	8.00	14.00	14.00
Chromium	22.00	24.00	11.00	13.00	11.00	.....	.....	.....	.....	.....
Chromium, Dull	.....	.....	.....	.....	.....	.....	.....	.....	42.00	14.00
Chromium, Polished	.....	.....	.....	.....	.....	.....	.....	.....	42.00	14.00
Colored Lacquers, 1 Coat	4.00	6.00	2.00	4.00	2.00	10.00	.....	.....	.....	.....
Colored Lacquers, 2 Coats	6.00	8.00	3.00	5.00	3.00	12.00	.....	.....	.....	.....
Colored Lacquers, 3 Coats	8.00	10.00	4.00	6.00	4.00	14.00	.....	.....	.....	.....
Copper, Antique	16.00	18.00	8.00	10.00	8.00	25.00	10.00	19.00	28.00	14.00
Copper, Mottled	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Copper, Brush	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Copper, Oxidized	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Copper, Polished	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Enamel, White Imitation (Lacquer)	6.00	8.00	3.00	5.00	3.00	12.00	4.00	8.00	14.00	14.00
Gun Metal	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Hemco (Lacquer)	.....	.....	.....	.....	.....	.....	.....	.....	14.00	14.00
Lacquer, Colored, 1 Coat	4.00	6.00	2.00	4.00	2.00	10.00	.....	.....	.....	.....
Lacquer, Colored, 2 Coats	6.00	8.00	3.00	5.00	3.00	12.00	.....	.....	.....	.....
Lacquer, Colored, 3 Coats	8.00	10.00	4.00	6.00	4.00	14.00	.....	.....	.....	.....
Nickel, Dull	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Nickel, Polished	10.00	12.00	5.00	7.00	5.00	16.00	8.00	15.00	21.00	14.00
Silver, Butler's (Brushed)	20.00	30.00	10.00	20.00	10.00	25.00	14.00	17.00	63.00	14.00
Silver, Satin	20.00	30.00	10.00	20.00	10.00	25.00	14.00	17.00	63.00	14.00
Silver, Oxidized	20.00	30.00	10.00	20.00	10.00	25.00	14.00	17.00	63.00	14.00
Silver, Polished	20.00	30.00	10.00	20.00	10.00	25.00	14.00	17.00	63.00	14.00
Telephone Red	.....	.....	.....	.....	.....	.....	.....	.....	14.00	14.00
Templus (Lacquer)	.....	.....	.....	.....	.....	.....	.....	.....	14.00	14.00
Verde Antique (Lacquer)	6.00	8.00	3.00	5.00	3.00	12.00	4.00	8.00	14.00	14.00
Ivory (Lacquer)	.....	.....	.....	.....	.....	.....	.....	.....	21.00	14.00

*Applies only to multiple gang and combination plates.

Bryant Flush Plate Sections

Schedule H

Combination plates should be described by using the letters shown with the illustrations of the respective plates, giving the letters in order from left to right, or from top to bottom, as the devices are to be mounted.

The list price of a horizontal combination plate of two or three sections, in brush brass finish when dimensions and spacings are standard and the devices are arranged in one horizontal row, will be the sum of the lists shown. The list price of a horizontal combination plate of 4 or more sections in combination is the sum of the list prices shown plus 25% of that sum for the combination feature.

For plates with devices mounted tandem or in more than one horizontal row, add 20% to the sum of the list prices for 2 and 3-gang plates; for 4 or more gangs, add 50%.

Use the prices below when ordering combination plates.

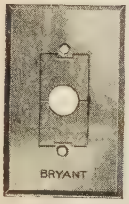
A

Type A plate has been superseded by Type B plate.

Type B plate consists of the Type F plate with No. 3850 Removable Jewel.

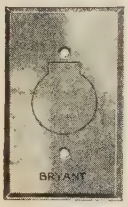
B List, Solid, **$.98**
List, .060 in. **.68**
List, .040 in., **.62**
Bull's Eye
Consists of "F" Plate with No. 3850 Bull's Eye Jewel
For Cat. Nos. **427** and **627** Lamp Holder Receptacles

B3 List, Solid, **$14.36**
Consists of No. **737** Bull's Eye Jewel
and has a Cast Brass Tumbler Holder in Place of the Lower Mounting Screw
Made of Solid Brass Only



C List, Solid, **$1.24**
List, .060 in., **.78**
Chapman Receptacle Plate
Not Furnished in .040 in. Brass
For Cat. No. **1363** Chapman Receptacle

D List, Solid, **$1.24**
List, .060 in., **.78**
"D.D." Receptacle Plate
Not Furnished in .040 in. Brass
For Cat. Nos. **430** and **630** "D.D." Receptacles



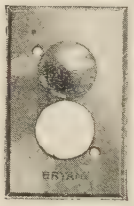
E List, Solid, **$.76**
List, .060 in., **.44**
List, .040 in., **.38**
Single Flush Receptacle Plate With Door
For Cat. Nos. **124, 1708** and **9024** Flush Receptacles

E2 List, Solid, **$1.26**
Duplex Flush Receptacle Plate With Doors
Made of Solid Brass Only
For Cat. No. **546** Flush Receptacle

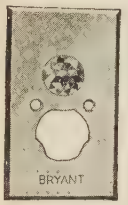
F List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Single Flush Receptacle Plate Without Door
Will take Cat. Nos. **736** and **737** Bull's Eye Jewels to make "B" Plate
Also for Cat. Nos. **120, 140, 556, 790, 1708, 4831, 9020, 9116, 9120** and **9326** Flush Receptacles

F2 List, Solid, **$1.08**
List, .060 in., **.76**
List, .040 in., **.70**
Duplex Flush Receptacle Plate Without Doors
For Cat. No. **546** Flush Receptacle

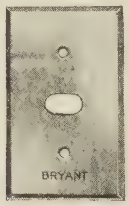
G List, Solid, **$.70**
List, .060 in., **.42**
List, .040 in., **.36**
★Telephone Plate With one Cord Hole



I List, Solid, **$1.04**
List, .060 in., **.76**
List, .040 in., **.70**
Plate for Cat. No. **121** "Spartan" Pilot Receptacle



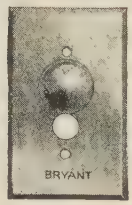
I2 List, Solid Only, **$1.04**
Plate for Cat. No. **5121** Combination



J List, Solid, **$.68**
List, .060 in., **.52**
List, .040 in., **.46**
Plate for Cat. No. **411** and **411S** "Junior" Flush Receptacle

K List, Solid, **$.68**
List, .060 in., **.38**
List, .040 in., **.34**
★Blank Plate

L2 List, .040 in., **$1.20**
Made of .040 in. Brass Only
For Cat. Nos. **427** and **627** Receptacles



M List, Solid, **$1.04**
List, .060 in., **.76**
List, .040 in., **.70**
Plate for *Cat. No. **465** Combination

M2 List, Solid, **$1.04**
List, .060 in., **.76**
List, .040 in., **.70**
Plate for Cat. Nos. **2959** and **3959** Tumbler Switch and Pilot Lamp Combinations

★The supporting screw spacing for this section is $3\frac{3}{32}$ inches for .100-inch (solid) combination plates. The supporting screw spacing for this section is $2\frac{3}{8}$ inches for .060-inch and .040-inch stamped combination plates. Yoke No. H-10 is furnished for this section in stamped combination plates without extra charge.

Bryant Flush Plate Sections

The standard package quantity is 10 plates of one description (not 10 gangs). The carton quantity is 2 plates.

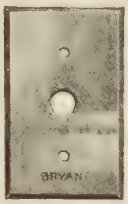
A combination plate cannot be so considered for billing purposes unless it is described by at least two different letters, but letters may be used to describe any desired arrangement of plate sections.

The standard finish of plates is brush brass which will be supplied if no finish is specified. For special finishes see another page.

Except for those listed as such, Templus and Hemco moulded composition plates cannot be supplied in combinations.

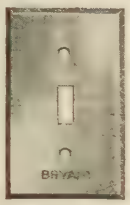
Use the prices below when ordering combination plates.

N List, Solid, **$1.16**
Old Style "Chapman" Receptacle Plate
For Cat. No. **613** Chapman Receptacle
Supporting Screw Spacing $2^{11}/_{16}$ in.
Made of Solid Brass Only



O List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
One-Button Push Switch Plate
For all Type "O" Flush Switches
Also Western Electric No. **367** Telephone Jack

P List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Two-Button Push Switch Plate
For all Two-Button Flush Switches



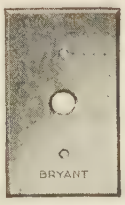
S List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Tumbler Switch Plate
For All Single Handle Vertically Operated Flush Tumbler Switches

S1 List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Tumbler Switch Plate for "Unigle" Switches

S2 List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Tumbler Switch Plate for "Dugle" Switches

S3 List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Tumbler Switch Plate For "Trigle" Switches

T List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
★Push-Button Plate
For 12 Volt Push Button
Cat. No. **3675**



T2 List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
★Telephone Jack Plate for Western Electric Telephone Jack Receptacle No. **367**

T3 List, Solid, **$3.04**
★Push-Button Plate With 12 Volt Push Button
Push Button and Plate cannot be separated
Made of Solid Brass Only

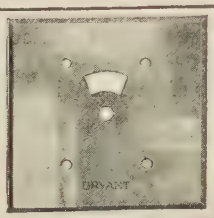
V List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Duplex Flush Receptacle Plate Without Doors
For Cat. Nos. **122, 142, 792, 4832** and **9022** Duplex Flush Receptacles

V2 List, Solid, **$1.40**
Duplex Flush Receptacle Plate With Doors
For Cat. Numbers **125** and **9025** Duplex Receptacles
Made of Solid Brass Only

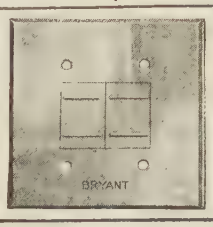
W List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Plate for Cat. No. **117** Switch and Receptacle Combination

W2 List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Plate for Cat. Nos. **2957** and **3957** Switch and Receptacle Combination

W4 List, Solid, **$.62**
List, .060 in., **.34**
List, .040 in., **.28**
Plate for Cat. Nos. **2994, 2995, 3994** and **3995** Switch and Receptacle Combinations



Y List, Solid, **$1.54**
List, .060 in., **1.06**
List, .040 in., **1.00**
Two-Gang Rotary Switch Plate
For Cat. No. **2568**
30 Amp., D. P. Rotary Flush Switch



Z List, Solid, **$3.08**
Two-Gang "D.D." Receptacle Plate
For Cat. No. **446**
25 Amp. "D.D." Flush Receptacle
Made of Solid Brass Only

★The supporting screw spacing for this section is $3^{3}/_{32}$ inches for .100 inch (solid) combination plates. The supporting screw spacing for this section is $2^{3}/_{8}$ inches for .060 inch ond .040 inch stamped combination plates. Yoke No. H-10 is furnished for this section in stamped combination plates without extra charge.

Hubbell Surface Toggle Switches

Pony Type

No. 9060

No. 9064

No. 9069

S. P. Switches have On and Off indications. Three-way Switches are non-indicating. Metal covers on switches without box covers are of the Snap-on type. All switches on box covers are fitted with screw-on type covers. Outlet box covers black japanned finish.

With Polished Nickel Covers

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Diam. of Base Ins.	Screw Hole Spacing	Wt. Lbs. Std. Pkg.
9060	$36.00	S. P., Slotted	6	3	2	1 7/16	24
9061	36.00	S. P., Solid	6	3	2	1 7/16	24
9062	67.88	3-Way, Slotted	5	2	2 1/8	1 7/16	27
9063	67.88	3-Way, Solid	5	2	2 1/8	1 7/16	27

Standard package 100; carton quantity 10.

With Polished Nickel Covers—For Outlet Boxes

9064	$43.00	S.P., 3 1/4" Box	6	3	3 7/16	2 3/4	24
9065	44.00	S.P., 4" Box	6	3	4 1/16	3 1/2	30
9066	74.94	3-Way, 3 1/4" Box	5	2	3 7/16	2 3/4	24
9067	77.78	3-Way, 4" Box	5	2	4 1/16	3 1/2	30

Standard package 50; carton quantity 5.

With Black Bakelite Covers—For Outlet Boxes

9068	$43.00	S.P., 3 1/4" Box	6	3	3 7/16	2 3/4	24
9069	44.00	S.P., 4" Box	6	3	4 1/16	3 1/2	30
9070	74.94	3-Way, 3 1/4" Box	5	2	3 7/16	2 3/4	24
9071	77.78	3-Way, 4" Box	5	2	4 1/16	3 1/2	30

Standard package 50; carton quantity 5.

Hubbell Surface Toggle Switches

Brush brass and nickel plate are standard finishes for switch covers. Brush brass covers furnished unless otherwise specified.

Black porcelain base.

Screw holes are elongated.

With 2 1/4-Inch Base

Screw spacings, 1 1/2 to 1 21/32 inches.

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
8171	$36.00	S. P., Solid	5	3	10	100	35
8191	36.00	S. P., Slotted	5	3	10	100	35
8421	84.00	S. P., Solid	10	5	10	100	35
8431	84.00	S. P., Slotted	10	5	10	100	35
8173	67.88	3-Way, Solid	5	3	10	100	35
8193	67.88	3-Way, Slotted	5	3	10	100	35

With 2 5/8-Inch Base

Screw spacings, 1 21/32 to 1 25/32 inches.

8112	$118.22	D. P., Solid	..	10	10	100	40
8162	118.22	D. P., Slotted	..	10	10	100	40
8153	118.22	3-Way, Solid	10	5	10	50	20
8233	118.22	3-Way, Slotted	10	5	10	50	20

No. 271 Hubbell Toggle Type Cord Switches

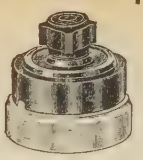
6 Amperes, 125 Volts; 3 Amperes, 250 Volts

Made of brown bakelite; modernistic in design. Fitted with large head binding screws; ample space is provided in wiring channels.

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
271	$30.52	Single Pole	10	50	5

Hubbell Surface Snap Switches

Metal covered.



Polished nickel finish.

Pony—Single Pole

5 Amperes, 125 Volts; 3 Amperes, 250 Volts

O.D. base, 2 in. Supporting screws spaced 1 11/32 in.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt. Lbs.
9510	$36.00	Slotted	10	100	23
9511	42.00	Slotted, Indicating	10	100	24
9512	36.00	Solid	10	100	24
9513	42.00	Solid, Indicating	10	100	24

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

O.D. base, 2 1/2 in. Supporting screws spaced 1 21/32 in.

9515	$84.00	Slotted, Indicating	10	100	41
9517	84.00	Solid, Indicating	10	100	41

3-Way

3 Amperes, 125 Volts; 1 Ampere, 250 Volts

O.D. base, 2 in. Supporting screws spaced 1 11/32 in.

9330	$67.88	Slotted	10	100	27
9331	67.88	Solid	10	100	27

Double Pole

5 Amperes, 250 Volts

O.D. base, 2 3/16 in. Supporting screws spaced 1 7/16 in.

9521	$99.54	Slotted, Indicating	10	100	30
9523	99.54	Solid, Indicating	10	100	30

10 Amperes, 250 Volts

O.D. base, 2 1/2 in. Supporting screws spaced 1 21/32 in.

9525	$118.22	Slotted, Indicating	10	100	43
9527	118.22	Solid, Indicating	10	100	43

4-Way

5 Amperes, 125 Volts; 2 Amperes, 250 Volts

O.D. base, 2 1/2 in. Supporting screws spaced 1 21/32 in.

9540	$254.52	Slotted	10	30	12
9541	254.52	Solid	10	30	12

Hubbell Toggle Appliance Switches

Single Pole

6 Amperes, 125 Volts

3 Amperes, 250 Volts

No. 8745

Depth of switch base, 3/4-inch; diameter, 1 1/4 inches. Diameter of neck, 1/2-inch.

Standard finishes are brush brass or polished nickel.

No. 8650

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*8650	$50.50	With 17/64-Inch Neck	25	50	4
*8656	57.58	With 1/2-Inch Neck	25	50	4
8745	54.74	With 17/64-Inch Neck, Ind.	25	50	4
*8746	61.82	With 1/2-Inch Neck, Ind.	25	50	5

*Can be supplied with luminous tip on handle at an addition of $25.00 per 100 units.

Hubbell Ceiling Pull Switches

5 Amperes, 250 Volts; 10 Amperes, 125 Volts

No. 7651

Supplied with 8 feet of black cord. Extra cord, $2.00 per 100 feet.

Diameter of base, 2 1/2 inches.

Mounting screws spaced 1 21/32 inches on centers.

Single Pole

Cat. No.	Per 100	Description	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7650	$155.54	Slotted Base	10	30	20
7651	155.54	Solid Base	10	30	20

3-Point

7653	$199.10	Slotted Base	2	10	8
7654	199.10	Solid Base	2	10	8

Hubbell Flush Toggle Switches

For Type C Lamps—With Enclosed Bakelite Base

Will fit 1½-inch switch boxes. Supporting screw holes spaced 3⅜ inches on centers.

No. 9801

With Square Composition Handle

Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Car-ton	Std. Pkg.	Wt. Lbs. Std. Pkg.
*9801	$77.78	S. P., Ind.	10	5	10	50	13
*9802	127.26	D. P., Ind.	..	10	2	10	4
*9803	98.98	3-Way....	10	5	10	20	8
9933	141.40	3-Way....	20	10	2	10	8
*9804	311.08	4-Way....	5	2	2	10	5
*9805	127.26	S. P., Ind.	..	20	2	10	4
*9806	141.40	D. P., Ind.	..	20	2	10	4

Both brown and black handles are standard; brown will be furnished unless otherwise specified. If desired grounded suffix letter G to catalogue number.

No. 7901

With Square Metal Handles

*7901	$98.98	S. P., Ind.	10	5	10	50	16
*7902	148.48	D. P., Ind.	..	10	2	10	8
*7903	120.20	3-Way....	10	5	10	20	11
9623	162.62	3-Way....	20	10	2	10	8
*7904	332.30	4-Way....	5	2	2	10	8
*7905	148.48	S. P., Ind.	..	20	2	10	6
*7906	162.62	D. P., Ind.	..	20	2	10	8

When ordering toggle switches to be used with specially finished plates, care should be taken to specify the finish for handles of the toggle switches. Regularly supplied grounded. Standard finish is brush brass.

No. 7701

With Indestructible Live Rubber Handles

7701	$82.78	S. P., Ind.	10	5	10	50	16
7702	132.26	D. P., Ind.		10	2	10	8
7703	103.98	3-Way....	10	5	10	20	11
7704	316.08	4-Way....	5	2	2	10	8
7705	132.26	S. P., Ind.	..	20	2	10	6
7706	146.40	D. P., Ind.	..	20	2	10	8

Locking Type—For Use with Standard Rectangular Opening Switch Plates

Has same mechanism as 9801 line. Brush brass and black are standard finishes on keyway. Brush brass furnished unless otherwise specified. Regularly supplied grounded.

One 8965 key furnished with each switch.

No. 9701

9701	$141.40	S. Pole...	10	5	10	50	13
9702	190.90	D. Pole...	..	10	2	10	5
9703	162.62	3-Way....	10	5	10	20	8
9613	205.04	3-Way....	20	10	2	10	8
9704	374.72	4-Way....	5	2	2	10	6
9705	190.90	S. Pole...	..	20	2	10	4
9706	205.04	D. Pole...	..	20	2	10	6
8965	14.14	Key.....	..	..	20	100	2

Momentary Contact—With Square Composition Handle

This switch is of same construction as 9801 line.

Both brown and black handles are standard; brown furnished unless otherwise specified.

Normally Closed Cat. No.	Normally Open Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Car-ton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*9601	*9901	$176.76	S. P., Ind.	10	5	10	50	13
*9602	*9902	226.24	D. P., Ind	..	10	2	10	4
....	*9903	197.96	3-Way....	10	5	10	20	8
....	*9904	410.06	4-Way....	5	2	2	10	5
*9605	*9905	226.24	S. P., Ind.	..	20	2	10	4
*9606	*9906	240.38	D. P., Ind	..	20	2	10	4

*Can be supplied with luminous tip on handle at an addition of $25.00 per 100 units.

Hubbell Flush Toggle Switches

With Porcelain Base

Will fit in 1½-inch switch boxes. Supporting screw holes spaced 3⅜ inches on centers.

Wide plaster ears, scored so as to be readily removed if desired, are standard equipment.

Switches with narrow aligning lugs are recommended for use with screwless bakelite plates and may be had when so specified. Wide plaster ears cannot be used with screwless plates. Body made of Nu-Blac porcelain.

No. 8801

With Square Composition Handle

Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Car-ton	Std. Pkg.	Wt. Lbs. Std. Pkg.
*8801	$32.00	S. P., Ind.	10	5	10	100	34
*8941	84.00	S. P., Ind.	..	20	2	10	6
8942	113.12	D. P., Ind.	..	20	2	20	13
*8802	84.00	D. P., Ind.	..	10	10	50	20
*8803	50.00	3-Way.....	10	5	10	50	20
*8804	280.00	4-Way.....	5	2	2	10	5

Both brown and black handles are standard. Brown furnished unless otherwise specified. If desired grounded suffix letter G to catalogue number.

No. 7801

With Square Metal Handle

*7801	$47.16	S. P., Ind.	10	5	10	100	34
*7802	99.16	D. P., Ind.	..	10	10	50	20
7842	128.28	D. P., Ind.	..	20	10	20	14
*7803	65.16	3-Way.....	10	5	10	50	20
*7804	295.16	4-Way.....	5	2	2	10	5
*7805	99.16	S. P., Ind.	..	20	2	10	6

When ordering toggle switches to be used with specially finished plates, care should be taken to specify the finish for handles of the toggle switches. Standard finish is brush brass. Regularly supplied grounded.

No. 7601

With Indestructible Live Rubber Handles

7601	$37.00	S. P., Ind.	10	5	10	100	26
7602	89.00	D. P., Ind.	..	10	10	50	7
7603	55.00	3-Way.....	10	5	10	50	16
7604	285.00	4-Way.....	5	2	2	10	16
7605	89.00	S. P., Ind.	20	..	2	10	8

Locking Type—For Use with Standard Rectangular Opening Switch Plates

Equipped with a special locking feature which prevents unauthorized manipulation of the switch except by the possessor of a No. 8965 key. Switch cannot be operated by screwdriver or other instrument but functions immediately when operated by the key.

One No. 8965 key is furnished with each locking switch.

Brush brass and black are standard finishes on keyway. Brush brass furnished unless otherwise specified. Regularly supplied grounded.

No. 8961

8961	$112.28	S. P.,.....	10	5	10	100	25
8962	147.00	D. P.....	..	10	10	50	18
8963	133.48	3-Way.....	10	5	10	50	18
8964	345.80	4-Way.....	5	2	2	10	8
8965	14.14	Key.....	..	..	20	100	2

No. 8965

*Can be supplied with luminous tip on handle at an addition of $25.00 per 100 units.

Hubbell LS Series Flush Switches

For Type C Lamps

LS-1

Specially designed for handling Type C lamp loads. Small in size; sturdy in construction; unusually large wiring space. Bakelite base fully encloses mechanism.

Single Switches

Fits regular brass or bakelite tumbler switch plates.

Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
LS-1	$32.00	Single Pole	10	5	10	100	20
LS-2	84.00	Double Pole	..	10	2	10	2½
LS-3	50.00	3-Way	10	5	10	50	10½
LS-4	280.00	4-Way	5	2	2	10	2½

LS-111

Electrically Connected Combinations

Each switch section takes same rating as corresponding single switch. Any combination can be supplied in 2 or 3 sections. Order by using single switch numbers in the order of the combination desired. The price is the sum of the lists of the switch sections. Combination switches are regularly supplied with common feed. If separate feed is desired, remove the shunt connection. Any of these switches can be supplied in lock style. When so specified, add L to catalogue number and $63.00 per 100 for each switch.

LS-6

Cat. No.	Per 100	Description	Wt., Lbs. Std. Pkg.
LS-11	$64.00	Two Single Pole	3
LS-13	82.00	One S.P., One 3-Way	3
LS-33	100.00	Two 3-Way	3
LS-111	96.00	Three Single Pole	3
LS-113	114.00	Two S.P., One 3-Way	3
Bakelite Plates for Connected Combinations			
LS-5	$15.00	1 Gang, 2 Openings	5
LS-6	21.00	1 Gang, 3 Openings	2
LS-7	30.00	2 Gangs, 4 Openings	2
LS-8	42.00	2 Gangs, 6 Openings	2

Acorn Flush Toggle Switches

No. 9991

No. 9993

Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9991	$13.68	Single Pole, Ind.	10	5	10	100	30
9991-I	22.00	Ivorine, S. P., Ind.	10	5	10	50	15
9993	26.32	3-Way	10	5	10	50	16
9993-I	42.00	Ivorine, 3-Way	10	5	10	25	8

Hubbell Push Button Switches

With Porcelain Base

No. 4401

Outside supporting screws spaced 3 9/32 inches on centers. Inside supporting screws are spaced 2 13/16 inches on centers. Depth of base, 1-inch.

Lock type switch can be furnished.

Cat. No.	Per 100	Description	Amperes 125-V.	Amperes 250-V.	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4401	$38.88	Single Pole	10	5	10	100	31
4402	108.88	Double Pole	..	10	10	50	17
4403	55.56	3-Way	10	5	10	50	17
4404	311.08	4-Way	5	2	2	10	5

Hubbell Uniplex Switches

With Single Square Bakelite Lateral Operating Handle in the Center

One Unit

No. 9911

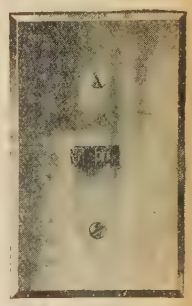
Ratings

Single Pole
3 Amperes, 250 Volts
6 Amperes, 125 Volts

Double Pole
5 Amperes, 250 Volts
10 Amperes, 125 Volts

3-Way
3 Amperes, 250 Volts
6 Amperes, 125 Volts

4-Way
2 Amperes, 250 Volts
5 Amperes, 125 Volts


Nos. 9911 and 9921 Assembled

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9911	$70.70	One Single Pole Unit	2	10	3
9912	98.98	One Double Pole Unit	2	10	3
9913	84.84	One 3-Way Unit	2	10	3
9914	282.80	One 4-Way Unit	2	10	3

Can be supplied with luminous tip on handle at an addition of $25.00 per 100 units.

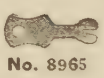
Single Plates for Uniplex Switches

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
9921	$19.80	.040″ Brush Brass	2	10	1½
9922	18.22	.040″ Lacco Brass	2	10	1½
9923	25.46	.060″ Brush Brass	2	10	2
9924	23.88	.060″ Lacco Brass	2	10	2
*9925	17.12	Mat Bakelite Screw Type	2	10	2
9926	40.40	Sand Blast Bakelite Screwless, Under-Plate	2	10	2
9927	52.64	.100″ Brush Brass	2	10	2
*4825	17.12	Ornamental Bakelite Screw Type	2	10	2
*9825	17.12	Ribbed Finish Bakelite Screw Type	2	10	2

*When bakelite screws are furnished add $1.00 per 10(gangs in standard package quantities. Duplex plates fur nished with metal screws only.

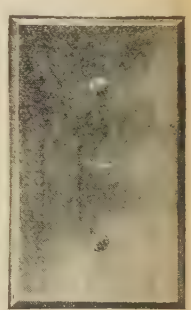
Locking Type—One Unit

No. 4911


No. 8965

Equipped with a special locking feature which prevents unauthorized manipulation of the switch except by the possessor of a No. 8965 key.

One No. 8965 key is furnished with each switch.


Nos. 4911 and 4921 Assembled

Regularly supplied grounded.

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4911	$134.34	One Single Pole Unit	2	10	3
4912	162.62	One Double Pole Unit	2	10	3
4913	148.48	One 3-Way Unit	2	10	3
4914	346.44	One 4-Way Unit	2	10	3

Single Plates for Uniplex Locking Type Switches

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
4921	$19.80	.040″ Brush Brass	2	10	1½
4922	14.14	.040″ Lacco Brass	2	10	1½
4923	25.46	.060″ Brush Brass	2	10	2
4924	19.80	.060″ Lacco Brass	2	10	2
4927	52.64	.100″ Brush Brass	2	10	2

Hubbell Duplex Switches

With Square Bakelite Lateral Operating Handles

Two Units

No. 9821

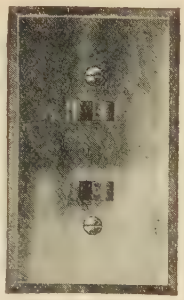
Ratings

Single Pole
3 Amperes, 250 Volts
6 Amperes, 125 Volts

Double Pole
5 Amperes, 250 Volts
10 Amperes, 125 Volts

3-Way
3 Amperes, 250 Volts
6 Amperes, 125 Volts

4-Way
2 Amperes, 250 Volts
5 Amperes, 125 Volts



Nos. 9823 and 8852 Assembled

Carton quantity, 2; Standard package, 10.

Cat. No.	Per 100	Description	Feed	Wt., Lbs. Std. Pkg.
8821	$120.20	Two Single Pole Units....	Common	3
9821	120.20	Two Single Pole Units....	Separate	3
8823	134.34	One S. P. and One 3-Way..	Common	3
9823	134.34	One S. P. and One 3-Way..	Separate	3
9824	148.48	Two 3-Way Units.....	Separate	3
9809	169.68	One S. P. and One D. P...	Separate	3
9810	183.82	One D. P. and One 3-Way	Separate	3
9811	353.50	One S. P. and One 4-Way.	Separate	3
9812	367.64	One 3-Way and One 4-Way	Separate	3
9813	197.96	Two Double Pole Units...	Separate	3

Can be supplied with luminous tip on handle at an addition of $25.00 per 100 units.

Single Plates for Duplex Switches

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*4854	$17.12	Ornamental Bakelite.....	2	10	2
8842	40.40	Bakelite Screwless.....	2	10	1½
8852	25.46	.060" Brush Brass.....	2	10	2
8952	23.88	.060" Lacco Brass.....	2	10	2
*8854	17.12	Mat Bakelite.....	2	10	2
8856	19.80	.040" Brush Brass.....	2	10	1½
8857	18.22	.040" Lacco Brass.....	2	10	1½
*9854	17.12	Ribbed Finish Bakelite.....	2	10	2

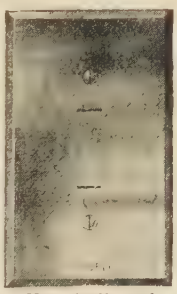
*When bakelite screws are furnished add $1.00 per 100 gangs in standard package quantities. Duplex plates furnished with metal screws only.

Locking Type—Two Units

No. 7821

Equipped with a special locking feature which prevents unauthorized manipulation of the switch except by the possessor of a No. 8965 key. One key furnished with each switch. Regularly supplied grounded.

Carton quantity, 2; standard package, 10.



Nos. 7852 and 7821 Assembled

Cat. No.	Per 100	Description	Feed	Wt., Lbs. Std. Pkg.
7821	$247.46	Two Single Pole Units.....	Common	3
4821	247.46	Two Single Pole Units.....	Separate	3
7823	261.60	One S. P. and One 3-Way...	Common	3
4823	261.60	One S. P. and One 3-Way...	Separate	3
4824	275.74	Two 3-Way Units.....	Separate	3
4809	296.94	One S. P. and One D. P.....	Separate	3
4810	311.08	One D. P. and One 3-Way..	Separate	3
4811	480.76	One S. P. and One 4-Way...	Separate	3
4812	494.90	One 3-Way and One 4-Way..	Separate	3
4813	325.22	Two Double Pole Units.....	Separate	3

Single Plates for Duplex Locking Type Switches

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7852	$25.46	.060" Brush Brass.....	2	10	2

Hubbell Triplex Switches

With Square Bakelite Handles

Three Units

No. 8833

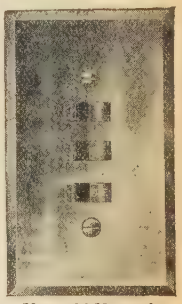
Ratings

Single Pole
3 Amperes, 250 Volts
6 Amperes, 125 Volts

Double Pole
5 Amperes, 250 Volts
10 Amperes, 125 Volts

3-Way
3 Amperes, 250 Volts
6 Amperes, 125 Volts

4-Way
2 Amperes, 250 Volts
5 Amperes, 125 Volts



Nos. 8853 and 8833 Assembled

Carton quantity, 2; standard package, 10.

Cat. No.	Per 100	Description	Feed	Wt., Lbs. Std. Pkg.
*8831	$183.82	Three Single Pole Units...	Common	3
*9831	183.82	Three Single Pole Units...	Separate	3
*8833	197.96	Two S. P. and One 3-Way..	Common	3
*9833	197.96	Two S. P. and One 3-Way..	Separate	3
*9814	240.38	Two S. P. and One D. P...	Separate	3
9641	424.20	Two S. P. and One 4-Way..	Separate	3

*Can be supplied with luminous tip on handle at an addition of $25.00 per 100 units.

Single Plates for Triplex Switches

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
*4855	$21.00	Ornamental Bakelite Screw Type.....	2	10	2
8843	40.40	Sand Blast Bakelite Screwless with Under-Plate No. 8844..	2	10	1½
8853	25.46	.060" Brush Brass.....	2	10	2
8953	23.88	.060" Lacco Brass.....	2	10	2
*8855	21.00	Mat Bakelite Screw Type....	2	10	2
8858	22.58	.040" Brush Brass.....	2	10	1½
8859	21.00	.040" Lacco Brass.....	2	10	1½
*9855	21.00	Ribbed Finish Bakelite Screw Type.....	2	10	2

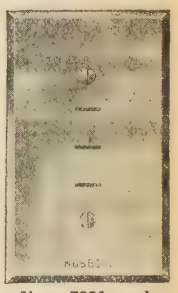
*When bakelite screws are furnished add $1.00 per 100 gangs in standard package quantities. Duplex plates furnished with metal screws only.

Locking Type—Three Units

No. 7831

Equipped with a special locking feature which prevents unauthorized manipulation of the switch except by the possessor of a No. 8965 key. One key furnished with each switch. Regularly supplied grounded.

Carton quantity, 2; standard package, 10.



Nos. 7831 and 7853 Assembled

Cat. No.	Per 100	Description	Feed	Wt., Lbs. Std. Pkg.
7831	$374.72	Three Single Pole Units....	Common	3
4831	374.72	Three Single Pole Units....	Separate	3
7833	388.86	Two S. P. and One 3-Way...	Common	3
4833	388.86	Two S. P. and One 3-Way...	Separate	3
4814	431.28	Two S. P. and One D. P....	Separate	3

Single Plates for Triplex Locking Type Switches

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
7853	$25.46	.060" Brush Brass.....	2	10	2

Hubbell Plates for Switches

For Square Handle Toggle Switches

For Push Switches

Plates in brush brass, lacco or special finishes may be assorted to make standard package or carton quantity.

Struck-Up—.040-Inch Metal

Brush Brass

For Square Handle Toggle Switches Cat. No.	Per 100	For Push Switches Cat. No.	Per 100	Style Plates	Wt., Lbs. Std. *Pkg.
8771	$12.00	8511	$12.00	Single	20
8772	24.00	8512	24.00	2-Gang	16
8773	36.30	8513	36.30	3-Gang	14
8774	124.44	8514	124.44	4-Gang	13
8775	155.54	8515	155.54	5-Gang	12
8776	186.64	8516	186.64	6-Gang	10
8777	217.76	8517	217.76	7-Gang	9
8778	248.86	8518	248.86	8-Gang	7

Lacco Brass

8781	$10.50	8521	$10.50	Single	20
8782	21.00	8522	21.00	2-Gang	16
8783	31.56	8523	31.56	3-Gang	14
8784	101.80	8524	101.80	4-Gang	13
8785	127.26	8525	127.26	5-Gang	12
8786	152.72	8526	152.72	6-Gang	10
8787	178.16	8527	178.16	7-Gang	9
8788	203.62	8528	203.62	8-Gang	7

Struck-Up—.060-Inch Metal

Brush Brass

8751	$22.10	8551	$25.46	Single	29
8752	44.20	8552	50.90	2-Gang	26
8753	66.30	8553	76.36	3-Gang	25
8754	147.06	8554	147.06	4-Gang	23
8755	183.82	8555	183.82	5-Gang	22
8756	220.58	8556	220.58	6-Gang	20
8757	257.34	8557	257.34	7-Gang	18
8758	294.12	8558	294.12	8-Gang	16

Solid Brass—.100-Inch Metal

Brush Brass

8761	$52.64	8571	$52.64	Single	35
8762	105.28	8572	105.28	2-Gang	33
8763	157.92	8573	157.92	3-Gang	31
8764	237.56	8574	237.56	4-Gang	29
8765	296.94	8575	296.94	5-Gang	27

Solid Brass—.100-Inch Metal—Tandem

Brush Brass

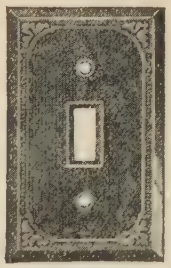
8795	$142.82	8592	$142.82	2-Gang	33
8796	214.22	8593	214.22	3-Gang	31
8797	285.62	8594	285.62	4-Gang	29

*A carton consists of 10 single plates of a kind or equivalent in gangs. A standard package consists of 100 single plates of a kind or equivalent in gangs.

Hubbell Bakelite Switch Plates

Mat, Ornamental and Ribbed Finish

No. 7095 Mat



No. 4095 Ornamental

No. 7141 Mat

The top surface of the mat plate has a stipple finish, set off by a narrow polished border.

The ribbed plate has a ribbed surface set off by a plain polished border; while the ornamental plate is also ribbed, but set off by a decorative border.

For Square Handle Switches

Mat Surface Cat. No.	Ribbed Surface Cat. No.	Ornamental Surface Cat. No.	Per 100	Style Plates	Wt. Lbs. Std. Pkg.
†*7095	*9095	*4095	$8.42	Single	10
†*7121	*9121	*4121	16.84	2-Gang	10
†*7122	*9122	*4122	25.26	3-Gang	10
7138	9138	4138	64.64	4-Gang	10
....	9135	....	90.90	5-Gang	10
....	9136	....	109.08	6-Gang	10

Tandem Plates

Mat Surface Cat. No.	Ornamental Surface Cat. No.	Per 100	Ribbed Surface Cat. No.	Per 100	Style Plates	Wt. Lbs. Std. Pkg.
7139	4139	$59.08	9139	$65.00	2-Gang	10

For 2-Button Push Switches

Mat Surface Cat. No.	Ribbed Surface Cat. No.	Ornamental Surface Cat. No.	Per 100	Style Plates	Wt. Lbs. Std. Pkg.
†*7141	*9141	*4141	$8.42	Single	10
†*7142	*9142	....	16.84	2-Gang	10
†*7143	*9143	....	25.26	3-Gang	10
....	9144	....	60.40	4-Gang	10

†Price covers mat finish surface. For genuine sand blast finish add $3.00 per 100 gangs.

*Brown bakelite is standard for flush plates. For black bakelite add $1.00 per 100 gangs. Regularly furnished with metal screws. When bakelite screws are furnished add $1.00 per 100 gangs in standard package quantities. Duplex plates furnished with metal screws only.

Any of the above push switch plates may be assorted to obtain standard package or carton quantities.

Carton, 10 gangs; standard package, 100 gangs.

Blank Plates

7124	9124	4124	$22.10	For Single Gang Box	16
7222	9222	4127	44.20	For 2-Gang Box	12

Carton, 10 gangs; standard package, 50 gangs.

Telephone Outlet Plates

7128	9128	4128	$22.10	Single (Single Outlet)	15
....	*9129	....	36.36	2-Gang	12
....	†9130	....	36.36	2-Gang	12

Carton, 10 gangs; standard package, 50 gangs.

Radio Outlet Plates for No. 2139 Outlet

Mat Surface Cat. No.	Ribbed Surface Cat. No.	Per 100	Ornamental Surface Cat. No.	Per 100	Style Plates	Wt., Lbs. Std. Pkg.
2142	2143	$16.16	4128	$22.10	Single	4

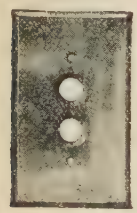
Carton, 10 gangs; standard package, 30 gangs.

*No. 9129 has one $^{13}/_{32}$-inch hole in center.

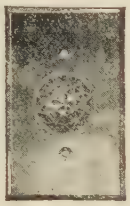
†No. 9130 has two $^{13}/_{32}$-inch holes in tandem position in center.

Hubbell Combination Brass Plates

Hubbell Combination Plates are made in .100-inch solid brass, struck up .060 and .040 inch brass. The standard finish is brush brass. If desired in Lacco finish specify and deduct 8 cents per gang from list prices. The advance for special finishes should be added to brush brass list prices. If plates are ordered by letter only and no finish is specified, brush brass will be supplied. A combination plate must be made up of 2 or more different letters. For example: AA is not a combination plate.

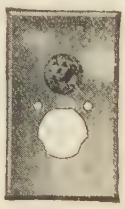


A For Push Switch
$.62—Solid
.34—.060 Inch
.28—.040 Inch



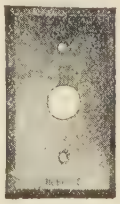
C With Round Bull's-eye for Pilot Light Receptacle
$.98—Solid
.68—.060 Inch
.62—.040 Inch

T With Rectangular Bull's-eye for Pilot Light Receptacle
$.98—Solid
.68—.060 Inch
.62—.040 Inch

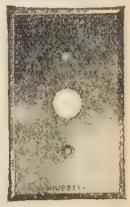


F For No. 7712 Pilot Light Receptacle
$1.04—Solid

S For No. 7739 Switch and Bull's-eye
$1.04—Solid



O *For ⅝-Inch Push Button
$.62—Solid
.34—.060 Inch
.28—.040 Inch



B For Hubbell Round Handle Toggle Switches
$.62—Solid
.34—.060 Inch
.28—.040 Inch

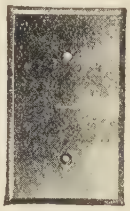
D *For Outlet Box
$.68—Solid
.38—.060 Inch
.34—.040 Inch

P For Square Handle Toggle Switch
$.62—Solid
.34—.060 Inch
.28—.040 Inch

Z For Uniplex Switch with Square Handle
$.62—Solid
.34—.060 Inch
.28—.040 Inch

Q For Duplex Switch with Square Handles
$.62—Solid
.34—.060 Inch
.28—.040 Inch

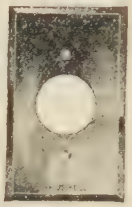
R For Triplex Switch with Square Handles
$.62—Solid
.34—.060 Inch
.28—.040 Inch



L For Uniplex Switch, Locking Type
$.62—Solid
.34—.060 Inch
.28—.040 Inch

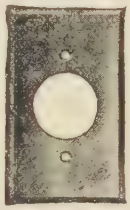
U For Duplex Switch, Locking Type
$.62—Solid
.34—.060 Inch
.28—.040 Inch

V For Triplex Switch, Locking Type
$.62—Solid
.34—.060 Inch
.28—.040 Inch



G †For Single Convenience Outlets
$.62—Solid
.34—.060 Inch
.28—.040 Inch

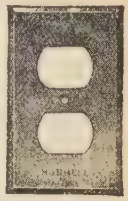
Also other Standard 2, 3 and 4-Wire Flush Receptacles with Round Faces



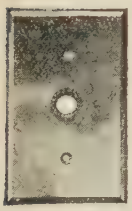
Y †For No. 7410 4-Wire Twist-Lock Receptacle Only
$.62—Solid
.34—.060 Inch
.28—.040 Inch

K †For No. 7438 Receptacle Only
$.62—Solid
.34—.060 Inch
.28—.040 Inch

J **For No. 5579 Convenience Outlet Double Hinge Cover
$1.62—Solid



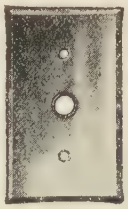
H For Duplex Convenience Outlet
$.62—Solid
.34—.060 Inch
.28—.040 Inch



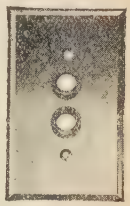
M *For Telephone Outlet One Bushing
$.70—Solid
.42—.060 Inch
.36—.040 Inch

N *For Telephone Outlet Two Bushings
$.76 Solid
.48—.060 Inch
.42—.040 Inch

E For Switch and Receptacle No. 8888 etc.
$.62—Solid
.34—.060 Inch
.28—.040 Inch



W For Single Radio Outlet No. 2139
$.62 Solid
.34—.060 Inch
.28—.040 Inch



X For Duplex Radio Outlet No. 2145
$.62—Solid
.34—.060 Inch
.28—.040 Inch

*Screw spacing, 2⅜ inches. Adapter to 3$\frac{9}{32}$ inches for box mounting supplied with this section.

**Only supplied in solid brass.

†Combinations embracing two adjacent G, Y, or K sections for Nos. 7250, 7310, 7410, or 7438 receptacles, require an extra blank gang between them to provide space for insertion of caps.

Standard package consists of 10 plates of one combination (not 10 gangs).

Carton consists of 1 plate.

Standard finish is brush brass, and will be so furnished unless otherwise specified.

The price of any combination plate up to and including 3-gangs is the sum of the individual prices of the component plates.

For combination plates of 4 or more horizontal gangs, add 25%. For tandem gangs, add 25% to price of horizontal plates. Tandem plates are supplied in solid brass only.

Hubbell Special Finishes

Sockets, Plug Material, Flush Plates and Metal Handles on Switches

Prices per 100 (To be Added to Price of Corresponding Device in Standard Finish)

Special Finish Description	Complete Brass Shell Sockets and Pull Switches		Brass Shell Socket and Pull Switch Parts					Brass Covered Plug Caps		
	Key Keyless Push	Pull	Key Keyless Push Bodies	Pull Bodies	Caps Only	Brass Covered Bases Only	Switch Handles Shade Holders	10 A. Caps Standard	10 and 20 Amp. Large Polarized Caps	Plates (E) (F) Flush Standard
Bakelite (Imitation)	$6.00	$8.00	$3.00	$5.00	$3.00	$12.00	$3.00	$4.00	$8.00	$14.00
Barff, Bauer	6.00	8.00	3.00	5.00	3.00	12.00	3.00	4.00	8.00	14.00
(C) Brass, Brush	C	C	C	C	C	C	C	C	C	C
Brass, Flemish	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Brass, Oxidized	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Brass, Polished	6.00	8.00	3.00	5.00	3.00	12.00	3.00	4.00	8.00	14.00
Brass, Polished (Not Lacquered)	6.00	7.00	3.00	4.00	3.00	12.00	3.00	4.00	7.00	14.00
Brass, Sand Blast Antique	22.00	24.00	11.00	13.00	11.00	30.00	11.00	12.00	24.00	42.00
Brass, Sand Blast Brush	18.00	20.00	9.00	11.00	9.00	28.00	9.00	8.00	20.00	35.00
(D) Bronze, Brush	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
(D) Bronze, Japanese (Dark)	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
(D) Bronze, Polished	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
(D) Bronze, Statuary (Light)	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
(D) Bronze, Sand Blast Ant	22.00	24.00	11.00	13.00	11.00	30.00	11.00	12.00	24.00	42.00
Chromium	22.00	24.00	11.00	13.00	11.00	30.00	11.00	12.00	24.00	42.00
Copper, Antique or Acid	16.00	18.00	8.00	10.00	8.00	25.00	8.00	10.00	18.00	28.00
Copper, Brush	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Copper, Oxidized	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Copper, Polished	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
(A) Enamel White (Lacquer)	6.00	8.00	3.00	5.00	3.00	12.00	3.00	4.00	8.00	14.00
(B) Gold	B	B	B	B	B	B	B	B	B	B
Gun Metal	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Ivory (Lacquer)	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Nickel, Dull	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Nickel, Polished	10.00	12.00	5.00	7.00	5.00	16.00	5.00	8.00	12.00	21.00
Nickel, Sand Blast	22.00	24.00	11.00	13.00	11.00	30.00	11.00	12.00	24.00	42.00
Silver, Butler's (Brushed)	20.00	30.00	10.00	20.00	10.00	25.00	10.00	14.00	30.00	63.00
Silver, Oxidized	20.00	30.00	10.00	20.00	10.00	25.00	10.00	14.00	30.00	63.00
Silver, Polished	20.00	30.00	10.00	20.00	10.00	25.00	10.00	14.00	30.00	63.00
Silver, Satin	20.00	30.00	10.00	20.00	10.00	25.00	10.00	14.00	30.00	63.00
Verde, Antique (Lacquer)	6.00	8.00	3.00	5.00	3.00	12.00	3.00	4.00	8.00	14.00

Socket Material

(A) Pull devices in white finish but with chain eyelet, chain and acorn in any electro plated finish except brush brass add $2.00 per 100 advance over price shown for key, keyless and push sockets.

(B) Finishes not listed, prices on application.

Pull devices in brush brass finish but chain, tassel and eyelet in other finishes add to list difference between columns 1 and 2.

(C) Standard finish on brass shell devices is brush brass. Furnished on all orders where no finish is specified.

Plated finish on pull chain parts furnished at an addition of $2.00 per 100. Subject to quantity reduction.

Standard and special finishes of one catalogue number may be assorted to make up standard packages.

The above prices for special finishes apply to small lots. When ordering in quantity lots of one finish, one shipment, single or assorted catalogue numbers, they are reduced as follows:

Lots 250 to 499, finish price reduced 10%.

Lots 500 to 999, finish price reduced 20%.

Lots 1000 and over, finish price reduced 50%.

These quantity deductions should be made from prices of finishes before the trade discounts are figured.

Assembled or unassembled sockets with brush brass but unlacquered shells take same price as brush brass.

Plug Caps and Flush Plates

(D) For genuine bronze plates, prices on application.

(E) These prices should be added to brush brass prices and not Lacco.

(F) Prices applying to finishes on standard flush plates are based on single plates. When ordering gangs, add $14.00 per 100 gangs for each gang beyond the first, regardless of finish except gold.

The above prices for special finishes apply to small lots. When ordering in quantity lots of one finish, one shipment,—single or assorted catalogue numbers, they are reduced as follows:

100 to 499 gangs or caps, finish price reduced 10%.

500 to 999 gangs or caps, finish price reduced 20%.

1000 gangs or caps and over, finish price reduced 50%.

These quantity deductions should be made from prices of finishes before trade discounts are figured.

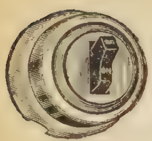
Unfinished flush plates, that are polished and buffed, will be supplied at same price as polished brass plates or at same price as brush brass if ground but not polished.

Unfinished flush plates, not polished or buffed (in rough state) will be furnished at same price as Lacco plates.

For ivory or white enamel finish on bakelite plates add the same extra as for brass plates.

H & H Pony Size Surface Tumbler Switches

With Nickel Cover (Snap Fastening)



With polished nickel covers and indicating handles.

Diameter of base, 2 inches.

Height, 1 7/8 inches.

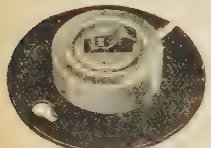
Single-Pole

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

Cat. No.	Per 100	Description	Screw Spacing In.	Carton	Std. Pkg.	Pkg. Wt. Lbs.
610	$36.00	Solid, Indicating.......	1 7/16	10	100	25
611	36.00	Slotted, Indicating.....	1 7/16	10	100	24
		3-Way				
		5 Amperes, 125 Volts; 2 Amperes, 250 Volts				
612	$67.88	Solid, Indicating.......	1 7/16	10	100	28
613	67.88	Slotted, Indicating.....	1 7/16	10	100	28

H & H Surface Pony Tumbler Switches

For Outlet Boxes—With Nickel Switch Covers



Japanned box covers are standard.

Diameter of Nos. 6064 and 6068, 3 7/16 inches.

Diameter of Nos. 6065 and 6069, 4 1/16 inches.

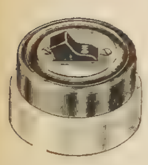
Single-Pole

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

Cat. No.	Per 100	Description	Screw Spacing In.	Carton	Std. Pkg.	Pkg Wt. Lbs.
6064	$43.00	With 3 1/4-inch Cover...	2 3/4	5	50	24
6065	44.00	With 4-Inch Cover.....	3 1/2	5	50	30
		3-Way				
		5 Amperes, 125 Volts; 2 Amperes, 250 Volts				
6068	$74.94	With 3 1/4-Inch Cover...	2 3/4	5	50	25
6069	77.78	With 4-Inch Cover.....	2 3/4	5	50	30

H & H Surface Tumbler Switches

With Nickel Covers



With slotted base and polished nickel covers.

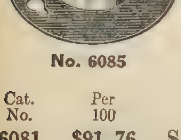
Diameter of base, 2 15/32 inches.

Screws spaced 1 3/4 inches on centers.

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
8472	$84.00	Single-Pole	10	5	10	100	41
8474	118.22	Double-Pole	..	10	10	100	44
8490	233.32	Double-Pole	..	20	10	30	22
8476	118.22	3-Way......	10	5	10	50	25

H & H Surface Tumbler Switches

With Outlet Box Cover and Nickel Switch Cover



No. 6085

Cat. No.	Per 100	Description	Size Cover In.	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
6081	$91.76	Single-Pole	3 1/4	10	5	10	50	30
6085	94.88	Single-Pole	4	10	5	10	50	35
6082	125.98	Double-Pole	3 1/4	..	10	10	50	33
6086	129.10	Double-Pole	4	..	10	10	50	38
6083	125.98	3-Way......	3 1/4	10	5	10	50	33
6087	129.10	3-Way......	4	10	5	10	50	33

For bakelite switch cover, add BC to Cat. No.; there is no difference in prices.

H & H Surface Switches

Single-Pole

Small Size: 5 Amperes, 125 Volts; 3 Amperes, 250 Volts

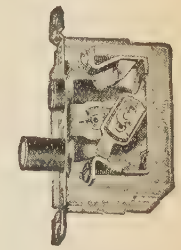
Diameter base, 2 inches. Height over all, 1 29/32 inches.

Cat. No.	Per 100	Description	Screw Spacing In.	Carton	Std. Pkg.	Pkg. Wt. Lbs.
2162	$42.00	Solid, Indicating.......	1 13/32	10	100	24
2163	42.00	Slotted, Indicating.....	1 13/32	10	100	23
		Large Size: 5 Amperes, 125 Volts; 3 Amperes, 250 Volts				
		Diameter base, 2 1/8 inches. Height over all, 1 3/4 inches.				
220	$56.56	Solid, Indicating.......	1 7/16	10	100	26
320	56.56	Slotted, Indicating.....	1 7/16	10	100	25
		10 Amperes, 125 Volts; 5 Amperes, 250 Volts				
		Diameter base, 2 15/32 inches. Height over all, 2 15/16 in.				
221	$84.00	Solid, Indicating.......	1 3/4	10	100	41
321	84.00	Slotted, Indicating.....	1 3/4	10	100	40
		Double-Pole				
		5 Amperes, 250 Volts				
		Diameter base, 2 1/8 inches. Height over all, 1 15/16 inches.				
2087	$99.54	Solid, Indicating.......	1 7/16	10	100	33
2088	99.54	Slotted, Indicating.....	1 7/16	10	100	33
		10 Amperes, 250 Volts				
		Diameter base, 2 15/32 inches. Height over all, 2 1/8 inches.				
222	$118.22	Solid, Indicating.......	1 3/4	10	100	50
322	118.22	Slotted, Indicating.....	1 3/4	10	100	50
		3-Way				
		3 Amperes, 125 Volts; 1 Ampere, 250 Volts				
		Diameter base, 2 1/8 inches. Height over all, 1 15/16 inches.				
2152	$67.88	Solid, Non-Indicating..	1 7/16	10	100	31
2153	67.88	Slotted, Non-Indicating	1 7/16	10	100	31
		5 Amperes, 125 Volts; 3 Amperes, 250 Volts				
		Diameter base, 2 1/8 inches. Height over all, 1 15/16 inches.				
2089	$79.18	Solid. Non-Indicating..	1 7/16	10	100	33
2090	79.18	Slotted, Non-Indicating	1 7/16	10	100	33

H & H Push Switches

With Porcelain Base

No. 4401



No. 2081

Depth, 1 Inch

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
4401	$38.88	Single-Pole.....	10	5	10	100	31
4402	108.88	Double-Pole....	..	10	10	50	17
4403	55.56	3-Way..........	10	5	10	50	17
4404	311.08	4-Way..........	5	2	2	10	8

Metal buttons supplied when specified; add M to Cat. No. Price upon application.

Wide plaster ears are optional; add G to Cat. No.

Lock Type—Depth, 1 Inch

4401-L	$126.38	Single-Pole.....	10	5	10	100	31
4403-L	161.56	3-Way..........	10	5	10	50	17

One No. 5003 Key is furnished with each lock switch.

Depth, 1 1/2 Inches

2081	$70.00	Single-Pole.....	10	5	10	100	49
2082	108.88	Double-Pole....	10	10	10	50	29
2083	108.88	3-Way..........	10	5	10	50	29
2084	311.08	4-Way..........	10	5	2	10	9

Metal buttons supplied when specified; add M to Cat. No.

Lock Type—Depth, 1 1/2 Inches

2081-L	$133.00	Single-Pole.....	10	5	10	100	50
2083-L	171.88	3-Way..........	10	5	10	50	30

One key is furnished with each lock switch.

H & H Tumbler Switches

Square Handle, Shallow 1-Inch Base

Porcelain Base

No. 8601

Wide plaster ears and brown handles are standard. Black handles supplied on special order.

Cat. No.	Per 100	Description	Amperes 125 V.	Amperes 250 V.	Carton	Std. Pkg.	Pkg. Wt., Lbs.
8601	$32.00	Single-Pole	10	5	10	100	30
8602	84.00	Double-Pole	..	10	10	50	17
8603	50.00	3-Way	10	5	10	50	21
8604	280.00	4-Way	5	2	2	10	8

Roller Contact Type

No. 701

Wide plaster ears and brown handles are standard.

701	$32.00	Single-Pole	10	5	10	100	26
703	50.00	3-Way	10	5	10	50	17

Composition Base

No. 1611

Brown handles are standard. Black handles supplied on special order.

Wide plaster ears are optional. Add G to Cat. No. if desired.

May be furnished with luminous jewel in operating lever at 50 cents each additional. Prefix RB to Cat. No.

1611	$77.78	Single-Pole	10	5	10	50	17
1612	127.26	Double-Pole	..	10	2	10	8
1613	98.98	3-Way	10	5	10	20	10
1614	311.08	4-Way	5	2	2	10	8

Lock Type—Porcelain Base

No. 8601-L

Wide plaster ears are standard.

No. 5003 Key furnished with each lock switch.

8601-L	$112.28	Single-Pole	10	5	10	100	30
8603-L	133.48	3-Way	10	5	10	50	17

Lock Type—Composition Base

Wide plaster ears are optional. Add G to Cat. No. if desired.

No. 5003 Key furnished with each lock switch.

1611-L	$140.78	Single-Pole	10	5	10	50	17
1613-L	162.62	3-Way	10	5	10	20	10

H & H Type C Flush Tumbler Switches

For Type C Gas Filled Lamps

No. 4281

Specially built to handle the initial current surge of gas filled medium size lamps.

Base is all bakelite, 2 inches deep.

Special phosphor bronze blades and contacts with large surfaces provide for the absorption and dissipation of heat.

Two arc snuffers cut off the arc and greatly increase breaking capacity.

Fit standard tumbler switch plates.

20 Amperes, 250 Volts

Cat. No.	Per 100	Description	Amperes 125 Volts	Amperes 250 Volts	Carton	Std. Pkg.	Pkg. Wt. Lbs.
4281	$127.26	Single-Pole	..	20	10	30	20
4282	141.40	Double-Pole	..	20	2	10	6
4283	141.40	3-Way	..	20	2	10	6
4286	424.20	4-Way	20	10	2	10	6
4284	141.40	Single-Pole, Quadruple Break	..	20	2	10	6
4285	141.40	Single-Pole, Multiple Break	..	20	2	10	6

Also furnished in lock type.

30 Amperes

Current carrying parts of these switches are three times heavier than ordinary switches to withstand the terrific smash of the largest cold Type C Lamps.

The mechanism has a kick-off or self starting feature which makes it impossible for the mechanism to stick.

4271	$151.90	Single-Pole	30	..	10	30	20
4272	201.50	Double-Pole	..	30	2	10	6
4273	201.50	3-Way	30	..	2	10	6
4274	607.62	4-Way	20	10	2	10	6
4275	201.50	Single-Pole, Quadruple Break	..	30	2	10	6
4276	201.50	Single-Pole, Multiple Break	30	..	2	10	6

Also furnished in lock type.

H & H Time-Saver Switches

Switches fit standard plates, brass or bakelite.

Switch mechanisms are fully enclosed in a one-piece bakelite base. Combinations come ready wired, completely assembled, all made up ready to install on the job.

Single Switches

No. TL-1

Supplied in lock style when specified.

Cat. No.	Per 100	Description	Amperes 125 V.	Amperes 250 V.	Carton	Std. Pkg.	Pkg. Wt. Lbs.
TL-1	$32.00	Single-Pole	10	5	10	100	18
TL-2	84.00	Double-Pole	..	10	2	10	2
TL-3	50.00	3-Way	10	5	10	50	9
TL-4	280.00	4-Way	5	2	2	10	2

2-Lever Switch Combinations

Supplied in lock style when specified. If only one lock is wanted instructions must be given on order.

Carton, 2. Standard package, 10.

No. TL-11

Cat. No.	Per 100	Description	Pkg. Wt. Lbs.
TL-11	$64.00	2 Single-Pole	3
TL-13	82.00	1 S. P. and One 3-Way	3
TL-33	100.00	Two 3-Way	3

3-Lever Switch Combinations

Supplied in lock style, but instructions must be given as to lock units desired.

TL-111	$96.00	3 Single-Pole	3
TL-113	114.00	2 S. P. and One 3-Way	3

Switches and Receptacles

No. TL-15

Carton, 2. Standard package, 10.

Cat. No.	Per 100	Description	Pkg. Wt. Lbs.
TL-15	$42.00	S.P. Switch and Receptacle	3
TL-115	79.00	2 S.P. Switches and Recept	3
TL-155	62.00	1 S.P. Switch and 2 Recepts.	3

Switches and Pilot Lights

Carton, 2. Standard package, 10.

TL-61	$127.50	Light and 1 S.P. Switch	3
TL-611	159.50	Light and 2 S.P. Switches	4

Pilot Lights and Receptacles

Receptacles and pilot lights are connected.

Carton, 2. Standard package, 10.

Cat. No.	Per 100	Description	Pkg. Wt. Lbs.
TL-67	$120.50	Pilot Light and Receptacle	3
TL-677	145.50	Pilot Light and 2 Receptacles	3

Pilot Lights, Switches and Receptacles

No. TL-617

Receptacle and pilot light are connected in combination TL-617.

Carton, 2. Standard package, 10.

Cat. No.	Per 100	Description	Pkg. Wt. Lbs.
TL-615	$142.50	Pilot Light, S.P. Switch and Receptacle	3
TL-617	152.50	Pilot Light, S.P. Switch and Receptacle	3

No. 7903-R Red Lamps for Pilot Lights

For replacements on TL combinations.

125-Volt Lamps.....per 100 .....

3-Outlet Receptacles and Plates

Plate is included with No. TL-555.

No. TL-555

No. TL-A

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
TL-555	$39.00	Receptacle and Plate	2	10	5
TL-A	5.50	Pull Handle Cap	10	100	5

H & H Plates

For Push Switches

No. 4077

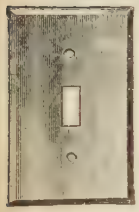
Carton, 10 gangs. Standard package, 100 gangs.

All plates for push switches may be assorted in standard packages and cartons.

Struck-Up, .040 Brass

Brush Brass Cat. No.	Per 100	Duro Finish Cat. No.	Per 100	For No. of Switches	Pkg. Wt. Lbs.
4077	$12.00	4077-D	$10.50	1	19
4078	24.00	4078-D	21.00	2	16

For Square Handle Tumbler Switches


No. 8841

Carton, 10 gangs. Standard package, 100 gangs.

All plates for square handle tumbler switches may be assorted in standard packages and cartons.

		Struck-Up .040 Brass			
8841	$12.00	8841-D	$10.50	1	19
8842	24.00	8842-D	21.00	2	16
8843	36.30	8843-D	31.56	3	14
		Struck-Up, .060 Brass			
8861	$22.10	8861-D	$20.52	1	26
		Solid Brass			
8851	$52.64	8851-D	$51.06	1	32

For Duplex Convenience Outlets

No. 1485

Carton, 10 gangs. Standard package, 100 gangs.

All duplex receptacle plates may be assorted in standard packages and cartons.

		Struck-Up, .040 Brass			
1485	$12.00	1485-D	$10.50	1	16

For Single Convenience Outlets
Without Lid

Carton, 10 gangs. Standard package, 100 gangs.

Single outlet plates may be assorted.

8631	$12.00	8631-D	$10.50	1	18

H & H Plates

Blank Plates

No. 4068

Carton, 10 gangs; standard package, 50.

All blank plates may be assorted for standard packages and cartons.

.040-Inch Brass

Brush Brass Cat. No.	Per 100	Duro Finish Cat. No.	Per 100	No. Gangs	Pkg. Wt. Lbs.
4068	$25.46	4068-D	$23.88	1	11

For Bull's-Eye Receptacles
With Ruby Bull's-Eye

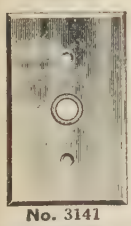
No. 8619

Carton, 10 gangs; standard package, 30.

All bull's-eye plates may be assorted for standard packages and cartons.

		.040-Inch Brass			
8691	$47.46	8691-D	$45.88	1	10
		Solid Brass			
3000	$88.00	3000-D	$86.42	1	13

Bell Bush Plate
With Push Button

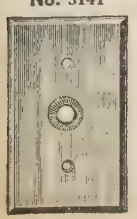

No. 3141

Carton, 10. Standard package, 50.

Screw holes spaced 2 9/32 inches on centers.

		Solid Brass			
3141	$118.78	3141-D	$113.12	1	24

For Telephone Outlets


No. 3144

Carton, 10 gangs; standard package, 50.

All telephone plates may be assorted in standard packages and cartons.

Screw holes spaced 2 3/8 inches on centers. This is a standard spacing and accomplished by using a sub-frame which is fastened to this frame, thus allowing adjustment for unevenness in box installation.

		Single Outlet, .040-Inch Brass			
3144	$28.28	3144-D	$26.70	1	10
		Double Outlet, .040-Inch Brass			
3244	$33.94	3244-D	$28.28	1	10

H & H Hegemite Plates

For Push Switches

No. 9021

Cat. Nos. Matte Surface	Border Design	Per 100	No. Gangs	Carton	Std. Pkg.	Pkg. Wt. Lbs.
8982	9011	$10.48	1	10	100	11
8982–2	9012	23.00	2	10	100	10

For Square Handle Tumbler Switches

No. 9030

8981	9021	$10.48	1	10	100	11
8981–2	9022	20.94	2	10	100	8
8981–3	9023	31.60	3	10	100	8
8981–4	9024	64.64	4	10	100	8

For Single Convenience Outlets

8983	9030	$10.48	1	10	100	10

For Duplex Convenience Outlets

8984	9040	$9.48	1	10	100	10

For Blank Plates

No. 8968

8987	9034	$22.10	1	10	50	7
8990	9035	44.20	2	10	50	7

For Telephone Plates

One opening.

8988	9036	$22.10	1	10	50	6

Miscellaneous Plates

No. 8986

Carton, 2 gangs. Standard package, 10 gangs.

For Switch and Receptacle

Cat. Nos. Matte Surface	Border Design	Per 100	No. Gangs	Pkg. Wt. Lbs.
8968	....	$21.82	1	3
	For Switch and Duplex Outfit			
8986	9019	$30.00	2	3
	For 2 Switches and Duplex Outlet			
....	9056	$54.54	3	4

H & H Duracrome Plates

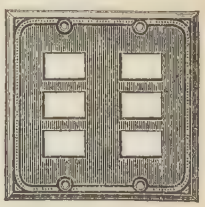
Of .040-inch brass, dull chromium finished.

Carton, 10 gangs. Standard package, 100 gangs.

Cat. No.	Per 100	Description	No. Gangs	Pkg. Wt. Lbs.
4151	$30.00	For Tumbler Switch...	1	19
4150	30.00	For Duplex Receptacle	1	16

H & H Time-Saver Bakelite Plates

No. 9060


No. 9063

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg. Wt. Lbs.
9060	$15.00	1 Gang, 2 Openings	10	50	5
9061	21.00	1 Gang, 3 Openings	5	25	2
9062	30.00	2 Gangs, 4 Openings	5	25	2
9063	42.00	2 Gangs, 6 Openings	2	20	2

GraybaR QUALITY
Everything Electrical
GraybaR ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

H & H Plates

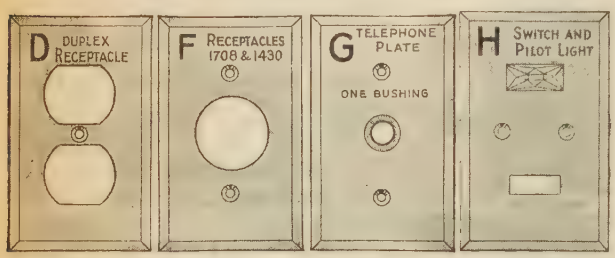
Symbols for Plates in Combinations

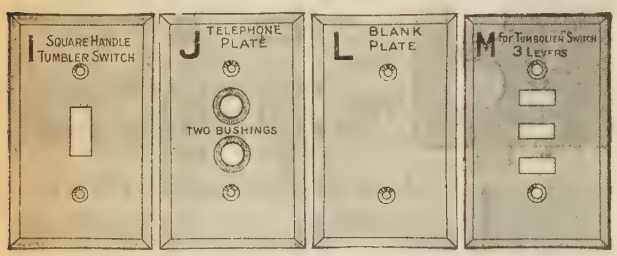
Standard combination plates of at least two different units are made up to order, from the units listed below. If spacings or dimensions differ from the standard units, special plate prices apply.

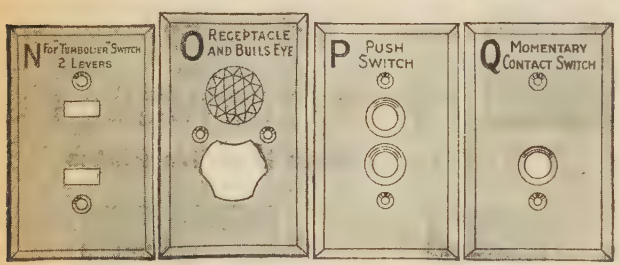
The price of a combination plate is the sum of the individual prices of the component plates. For a tandem combination, or a combination plate in which the gangs are placed in more than one row, add 25 per cent to the prices shown. For example, if plate PBD were a tandem plate, the price would be $2.22 plus 25 per cent or $2.77.

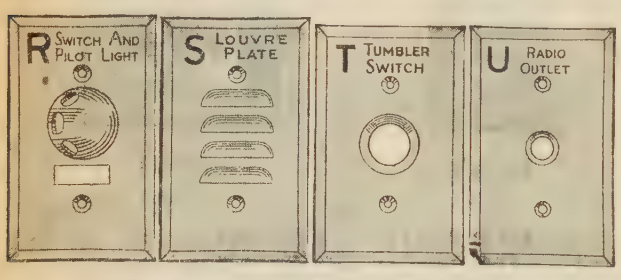
Standard package is 10 separate plates of the same combination.

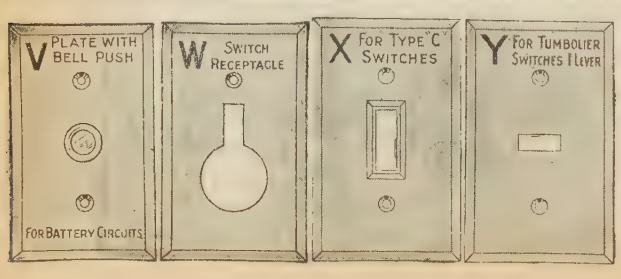
Standard finish is brush brass.











H & H Bakelite Canopy Pull Switches

These switches can be wired easily and quickly, without removing the mechanism. Just slip off the bakelite disc, attach the wires and replace the disc, bending down the tab.

Made of lustrous brown bakelite.

Possibility of shorting is eliminated—current carrying parts are enclosed in a bakelite compartment separated and insulated from all other metal parts.

Regular Style, without Mounting Attachment

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

No. 7745

Furnished with short chain and 6-foot cord.

Cat. No.	Per 100	Length Stem In.	Carton	Std. Pkg.	Pkg. Wt. Lbs.
7745	$70.00	1/4	10	100	12
7746	70.00	3/8	10	100	12
7716	70.00	5/8	10	100	12

With Adjustable U Bracket

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

No. 7745-B

For pan type fixtures. Adjustable for any depth of pan. Gives a rigid, straight down easy pull.

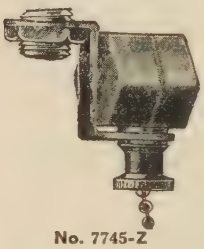
Offers greater wiring convenience and economy of installation.

Complete with short chain and 6-foot cord.

7745-B	$70.00	1/4	10	100	17
7746-B	70.00	3/8	10	100	17
7716-B	70.00	5/8	10	100	17

With Z Bar

6 Amperes, 125 Volts; 3 Amperes, 250 Volts



No. 7745-Z

A new, rigid canopy switch support. Fastens to fixture stud with lock nut and switch is attached to Z bar with stem. Affords a straight down pull, removing all strain from the canopy.

The short chain and 6-foot cord go out through a small knockout in lower side of canopy.

7745-Z	$70.00	1/4	10	100	17
7746-Z	70.00	3/8	10	100	17
7716-Z	70.00	5/8	10	100	17

With Chain Link

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

No. 7746-AH

Used between any two links. Tighten the stem and the switch is locked to the chain. It can't slip out or pull out. Makes a stable permanent installation. Furnished with short chain and 6-foot cord.

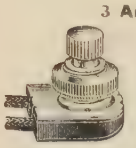
Standard finish is statuary bronze, but brass, black, or nickel is optional.

7745-H	$70.00	1/4	10	100	17
7746-H	70.00	3/8	10	100	17
7716-H	70.00	5/8	10	100	17
*7746-AH	70.00	3/8	10	100	17

*Angle pull.

Rotary Switches

3 Amperes, 125 Volts; 1 Ampere, 250 Volts



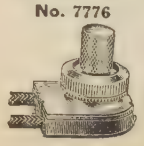
No. 7776

Depth of rotary switch, 3/8 inch.

Diameter of stem, 3/8 inch.

Fitted with 6-inch No. 18 stranded fixture wire. Wires up to and including 8 inches supplied without extra charge. For longer wires, add 9 cents per foot for each conductor.

Standard finish is brass on exposed parts, but wash nickel, bronze, or black is optional.



No. 7784

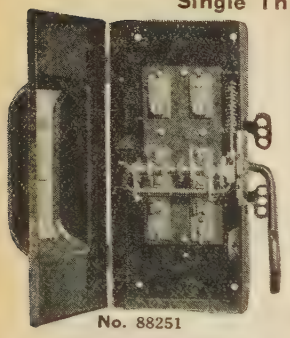
With Removable Metal Handles					
7776	$15.80	5/16	25	100	25
With Fixed Metal Handles					
7784	$15.80	5/16	25	100	25

Type A Square D Safety Switches

Quick-Make and Quick-Break

Interlocked Cover Control

Single Throw—Fusible



No. 88251

All switch parts are mounted on individual insulating bases, making it possible to remove and replace any switch part from the front of the switch in a few minutes time.

The cover control makes it impossible to open the cover when the switch is in the "on" position. Prevents operation of switch with box cover open.

Positive quick-make and quick-break action prevents the arc from holding and burning blades and jaws.

230 Volts A.C., 250 Volts D.C.

Cat. No.	Each	Amp.	H.P.	Poles	Box No.	Wt. Lbs.
*88251	$12.00	30	2	2	424-K	117
88252	15.00	60	5	2	424-K	16
88253	23.00	100	15	2	428-T	25
88254	40.00	200	30	2	431-X	56
88255	90.00	400	..	2	459-D	90
88256	130.00	600	..	2	464-C	155
†88257	220.00	800	..	2	.....	160
†88258	305.00	1200	..	2	.....	238
††88259	560.00	1800	..	2	.....	...
‡88250	680.00	2400	..	2	.....	...
*88351	15.00	30	3	3	430-M	20
88352	20.00	60	5	3	430-M	20
88353	30.00	100	10	3	433-M	38
88354	45.00	200	25	3	431-X	63
88355	100.00	400	..	3	456-C	135
88356	155.00	600	..	3	463-E	240
†88357	300.00	800	..	3	.....	280
†88358	385.00	1200	..	3	.....	350
††88359	790.00	1800	..	3	.....	...
‡88350	935.00	2400	..	3	.....	...
*88451	18.00	30	3	4	425-BB	24
88452	24.00	60	7½	4	425-BB	24
88453	40.00	100	15	4	431-Y	55
88454	60.00	200	30	4	437-G	86
88455	130.00	400	..	4	456-D	150
88456	205.00	600	..	4	463-F	275
†88457	385.00	800	..	4	.....	347
†88458	510.00	1200	..	4	.....	590
††88459	1020.00	1800	..	4	.....	...
‡88450	1260.00	2400	..	4	.....	...

Equipped with Arc Suppressors

575 Volts A.C., 600 Volts D.C.

*88261	$18.00	30	5	2	430M	34
88262	19.00	60	15	2	425-BB	26
88263	30.00	100	30	2	433-M	44
88264	47.00	200	50	2	461-J	70
88265	110.00	400	..	2	462-D	135
88266	175.00	600	..	2	463-E	224
▲†88247	270.00	800	..	2	.....	...
▲†88248	380.00	1200	..	2	.....	...

575 Volts A.C.

*88341	$22.00	30	7½	3	425-BB	25
88342	23.00	60	15	3	425-BB	25
88345	35.00	100	30	3	433-M	41
88344	58.00	200	50	3	461-J	70
88345	120.00	400	..	3	462-D	145
88346	200.00	600	..	3	463-E	250
†88347	350.00	800	..	3	.....	260
†88348	460.00	1200	..	3	.....	350
*88441	27.00	30	10	4	445-L	32
88442	29.00	60	20	4	445-L	32
88443	46.00	100	40	4	431-Y	45
88444	70.00	200	50	4	437-G	80
88445	155.00	400	..	4	462-E	160
88446	240.00	600	..	4	463-F	285
†88447	450.00	800	..	4	.....	280
†88448	575.00	1200	..	4	.....	370

*60-ampere switch with 30-ampere fuse spacing and clips.
†Double lugs. ††Triple lugs. ‡Quadruple lugs. These are quick-break only with no cover control.
▲575 volts only.

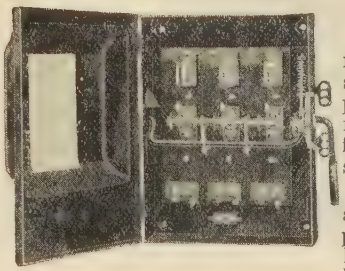
Type A Square D Safety Switches

Solid and Switched—Neutral Switches

Quick-Make and Quick-Break

Interlocked—Cover Control—Positive—Pressure Fuse Clips

Single Throw—Fusible



No. 89412

All switch parts are mounted on individual insulating bases, making it possible to remove and replace any switch part from the front of the switch in a short time.

Positive quick-make and quick-break action prevents the arc from holding and burning blades and jaws.

230 Volts A.C., 250 Volts D.C.

3-Wire Solid Neutral (2 Blades, 2 Fuses)

Cat. No.	Each	Amps.	Box No.	Weight Pounds
89311	$14.00	30	424-K	17
89312	17.00	60	424-K	17
89313	27.00	100	428-T	25
89314	44.00	200	431-X	46
89315	100.00	400	459-D	90
89316	145.00	600	464-C	155
†97317	240.00	800	.....	160
†97318	340.00	1200	.....	238

3-Wire Switched Neutral (3 Blades, 2 Fuses)

*89351	$15.00	30	430-M	19
89352	20.00	60	430-M	20
89353	30.00	100	433-M	38
89354	45.00	200	431-X	63
89355	100.00	400	456-C	135
89356	155.00	600	463-E	240
†89357	300.00	800	.....	280
†89358	385.00	1200	.....	350
††89359	790.00	1800	.....	...
‡89350	935.00	2400	.....	...

4-Wire Solid Neutral (3 Blades, 3 Fuses)

*89411	$18.00	30	430-M	20
89412	23.00	60	430-M	20
89413	36.00	100	433-M	38
89414	55.00	200	431-X	63
89415	115.00	400	456-C	135
89416	175.00	600	463-E	240
†97417	340.00	800	.....	280
†97418	420.00	1200	.....	350

5-Wire Solid Neutral (4 Blades, 4 Fuses)

*89511	$21.00	30	425-BB	24
89512	27.00	60	425-BB	24
89513	45.00	100	431-Y	55
89514	70.00	200	437-G	86
89515	145.00	400	456-D	150
89516	225.00	600	463-F	275

575 Volts A.C.

3-Wire Switched Neutral (3 Blades, 2 Fuses)

*89341	$22.00	30	453-C	32
89342	23.00	60	433-J	32
89343	35.00	100	431-H	45
89344	58.00	200	437-C	80
89345	120.00	400	.....	160
89346	200.00	600	.....	285
†89347	350.00	800	.....	...
†89348	460.00	1200	.....	...

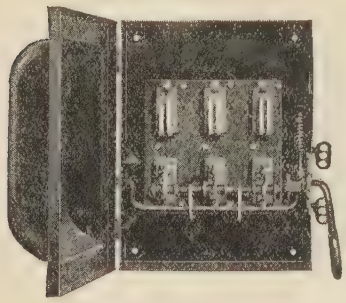
*60-ampere switch with 30-ampere fuse spacing and clips.
†Double lugs. Standard single lugs furnished on order. Quick-break only. No cover control.
††Triple lugs. Quick-break only. No cover control.
‡Quadruple lugs. Quick-break only. No cover control.

Type A Square D Safety Switches

Quick-Make and Quick-Break

Interlocked Cover Control

Single Throw—Not Fusible



No. 84343

All switch parts are mounted on individual insulating bases, making it possible to remove and replace any switch part from the front of the switch in a few minutes' time.

Positive quick-make and quick-break action prevents the arc from holding and burning blades and jaws.

Square D Cover Control makes it impossible to open the box cover when the switch is in the "on" position. It also prevents the operation of the switch with the box cover open. By means of a key authorized persons can open the cover when the switch is "on" and can operate the switch when the cover is open.

230 Volts A.C., 250 Volts D.C.

Cat. No.	Each	Amp.	H.P.	Poles	Box No.	Wt. Lbs.
84251	$11.00	30	5	2	447-W	15
84351	13.00	30	10	3	448-V	20
84451	18.00	30	10	4	448-V	25
230-275 Volts A.C., 250-600 Volts D.C.						
84262	$15.00	30–60	15	2	447-W	16
84263	23.00	100	40	2	430-N	23
84264	31.00	200	50	2	428-W	40
84265	90.00	400	..	2	461-H	78
84266	130.00	600	..	2	466-B	120
*†84247	195.00	800	..	2	.....	135
*†84248	265.00	1200	..	2	.....	200
*†84249	460.00	1800	..	2	.....	...
*‡84240	580.00	2400	..	2	.....	...
Equipped with Arc Suppressors						
230-575 Volts A.C.						
84342	$18.00	30–60	25	3	448-V	21
84343	27.00	100	40	3	425-FF	29
84344	38.00	200	50	3	455-D	55
84345	100.00	400	..	3	460-E	102
84346	160.00	600	..	3	465-C	134
†84347	260.00	800	..	3	.....	170
†84348	350.00	1200	..	3	.....	208
††84349	615.00	1800	..	3	.....	...
‡84340	845.00	2400	..	3	.....	...
84442	24.00	30–60	30	4	448-V	29
84443	35.00	100	40	4	453-J	36
84444	51.00	200	50	4	546	90
84445	130.00	400	..	4	460-F	120
84446	195.00	600	..	4	547	185
†84447	335.00	800	..	4	.....	205
†84448	460.00	1200	..	4	.....	255
††84449	895.00	1800	..	4	.....	...
‡84440	1110.00	2400	..	4	.....	...

*250 volts d.c., 575 volts a.c. only.

†Double lugs. Standard single lugs furnished on order. Quick-break only. No cover control.

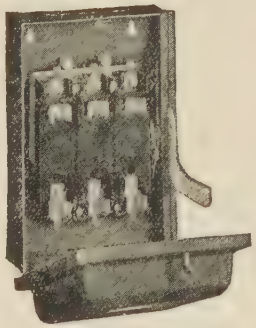
††Triple lugs. Quick-break only. No cover control.

‡Quadruple lugs. Quick-break only. No cover control.

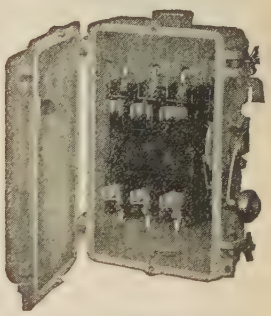
50,000 Line of Square D Compact Switches

Quick-Make and Quick-Break

Interlocked



Switch in Standard Sheet Metal Box



Dust-Tight, Weatherproof Cast Iron Box

Single Throw—Fusible

230 Volts A.C.—250 Volts D.C.

2-Pole

Sheet Metal Boxes Front Operated Cat. No.	Each	Castiron Boxes Side Operated Cat. No.	Each	Amps.	H. P. Rating
56251	$12.00	55251	$36.00	30	2
56252	15.00	55252	43.50	60	5
56253	23.00	55253	135.00	100	..
56254	40.00	55254	155.00	200	..
3-Pole					
56351	$15.00	55351	$37.50	30	3
56352	20.00	55352	45.50	60	5
56353	30.00	55353	145.00	100	..
56354	45.00	55354	172.00	200	..
3-Wire, Switched Neutral					
59351	$15.00	50351	$37.50	30	3
59352	20.00	50352	45.50	60	5
59353	30.00	50353	145.00	100	..
59354	45.00	50354	172.00	200	..
3-Wire, Solid Neutral					
59311	$14.00	50311	$37.50	30	3
59312	17.00	50312	45.50	60	5
59313	27.00	50313	145.00	100	..
59314	44.00	50314	172.00	200	..
575 Volts A.C.—600 Volts D.C.					
2-Pole					
56261	$18.00	55261	$45.00	30	5
56262	19.00	55262	45.00	60	15
56263	30.00	55263	154.00	100	..
56264	47.00	55264	179.00	200	..
3-Pole					
56341	$22.00	55341	$47.50	30	7½
56342	23.00	55342	47.50	60	15
56343	35.00	55343	158.50	100	..
56344	58.00	55344	191.00	200	..

Single Throw—Not Fusible

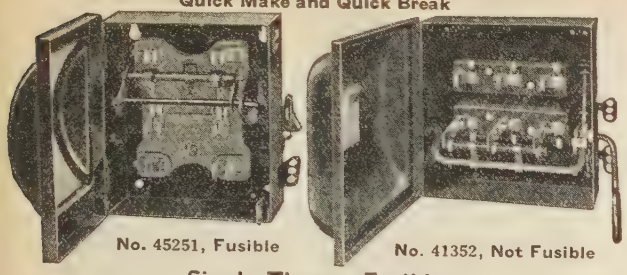
575 Volts A.C.—600 Volts D.C.

2-Pole

51261	$11.00	53261	$35.50	30	5
51262	15.00	53262	43.00	60	15
51263	23.00	53263	150.00	100	..
51264	31.00	53264	175.00	200	..
3-Pole					
51341	$13.00	53341	$36.50	30	10
51342	18.00	53342	45.00	60	25
51343	27.00	53343	154.00	100	..
51344	38.00	53344	187.00	200	..

Type C Square D Safety Switches

Quick Make and Quick Break



No. 45251, Fusible — No. 41352, Not Fusible

Single Throw—Fusible

Cat. No.	Each	230 Volts A. C., 250 Volts D. C. Amps.	H.P.	Poles	Box No.	Wt. Lbs.
45251	$4.00	30	2	2	442-N	5
*46251	9.00	30	2	2	447-S	14
46252	10.00	60	3	2	447-S	14
46253	16.00	100	7½	2	430-V	20
46254	22.00	200	15	2	428-Z	38
46255	64.00	400	....	2	459-G	85
46256	99.00	600	....	2	464-D	...
45351	6.00	30	3	3	423-M	10
*46351	11.00	30	3	3	430-T	18
46352	11.00	60	5	3	430-T	16
46353	20.00	100	10	3	425-AD	27
46354	29.00	200	25	3	431-J	46
46355	74.00	400	..	3	456-E	130
46356	115.00	600	..	3	463-G	...
48351	6.00	30	..	3SWN	423-M	10
47352	11.00	60	..	3SWN	430-T	16
47353	20.00	100	..	3SWN	425-AD	27
47354	29.00	200	..	3SWN	431-J	46
47355	74.00	400	..	3SWN	456-E	130
47356	115.00	600	..	3SWN	463-G	...
45451	13.00	30	3	4	440-E	12
*46451	15.00	30	3	4	425-AB	21
46452	15.00	60	7½	4	425-AB	22
46453	30.00	100	15	4	431-Z	44
46454	48.00	200	30	4	437-G	90
46455	105.00	400	..	4	456-D	150
46456	165.00	600	..	4	463-F	...
		575 Volts A.C.—With Arc Suppressors				
46341	$12.00	30	7½	3	430-T	18
46342	15.00	60	15	3	425-AB	17
46343	28.00	100	30	3	428-Y	27
46344	42.00	200	50	3	431-J	65
46441	20.00	30	10	4	445-M	27
46442	22.00	60	20	4	445-M	32
46443	40.00	100	40	4	431-Z	55
46444	57.00	200	50	4	437-G	90

*60-ampere switch with 30-ampere fuse spacing and clips.
SWN 3-wire switched neutral with 3 blades, 2 fuses.

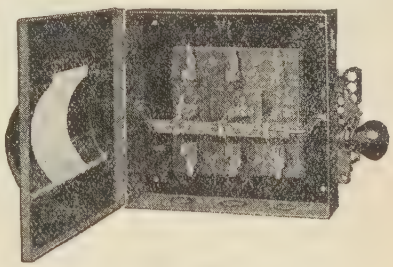
Single Throw—Not Fusible

		230 Volts A.C., 250 Volts D.C.				
43251	$4.00	30	3	2	442-N	5
41252	9.00	60	5	2	447-P	10
41253	16.00	100	7½	2	447-R	13
41254	21.00	200	15	2	428-Z	35
41255	45.00	400	..	2	461-K	66
41256	76.00	600	..	2	466-C	..
43351	6.00	30	3	3	423-N	9
41352	10.00	60	5	3	447-P	14
41353	17.00	100	10	3	448-W	21
41354	25.00	200	25	3	455-E	37
41355	57.00	400	..	3	460-G	84
41356	90.00	600	..	3	465-D	..
41452	15.00	60	7½	4	448-X	21
41453	27.00	100	15	4	453-K	31
41454	42.00	200	30	4	546	82
41455	75.00	400	..	4	460-F	87
41456	150.00	600	..	4	547	..
		575 Volts A.C.—With Arc Suppressors				
43341	$9.00	30	7½	3	423-N	9
41342	12.00	30–60	15	3	447-P	14
41343	22.00	100	30	3	448-W	21
41344	32.00	200	50	3	455-E	37
41345	49.00	400	..	3	.....	..
41442	20.00	30–60	20	4	448-X	21
41443	31.00	100	40	4	453-K	31
41444	47.00	200	50	4	546	82
41445	66.00	400	..	4	.....	..

Square D Safety Switches

Not Quick Break–Slate Base Construction

Double Throw—Not Fusible



No. 92351

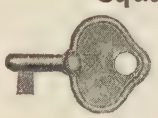
250 Volts D.C. and 230 Volts A.C.

Cat. No.	Each	Amperes	Poles	Box No.	Weight Pounds
92251	$13.00	30	2	423-C	10
92351	15.00	30	3	440-B	14
92451	22.00	30	4	448-E	20
92252	17.00	60	2	447-A	16
92352	20.00	60	3	448-E	22
92452	32.00	60	4	452-C	27
92253	30.00	100	2	426-E	24
92353	37.00	100	3	425-C	30
92453	66.00	100	4	451-A	58
92254	42.00	200	2	428-P	30
92354	61.00	200	3	451-A	65
92454	96.00	200	4	437-C	95
92255	120.00	400	2	.....	81
92355	160.00	400	3	.....	110
92455	216.00	400	4	.....	130
92256	170.00	600	2	.....	90
92356	224.00	600	3	.....	140
92456	280.00	600	4	.....	175

575 Volts, A.C.—Equipped with Arc Suppressors

92242	$19.00	30–60	2	447-A	16
92342	22.00	30–60	3	448-E	22
92442	35.00	30–60	4	452-C	27
92243	33.00	100	2	426-E	24
92343	40.00	100	3	425-C	30
92443	75.00	100	4	451-A	58
92244	47.00	200	2	428-P	30
92344	65.00	200	3	451-A	65
92444	105.00	200	4	437-C	95
92245	135.00	400	2	.....	81
92345	170.00	400	3	.....	110
92445	235.00	400	4	.....	130
92246	190.00	600	2	.....	90
92346	246.00	600	3	.....	140
92446	305.00	600	4	.....	175

Square D Cover Control Keys



No. 70010

Keys are not furnished with each switch as their distribution should be limited to those authorized to make inspections.

Cat. No. 70000, for Cover Control Type A Switches.....ea. **$.50**
Cat. No. 70010, for Motor Starters.....ea. **.50**

GraybaR QUALITY since 1896
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

Square D General Service Switches

No. 98251

Quick Break
(Except 30-Ampere)

Single Throw

230 Volts A.C.
250 Volts D.C.

Fusible

Close End Boxes

2-Pole

Cat. No.	Each	Amp.	Fuses
*99211	$2.00	30	2-Plug
†96211	2.50	30	2-Plug
*98251	2.50	30	2-Cart.
†99251	3.00	30	2-Cart.
96252	8.00	60	......
96253	14.00	100	......
3-Pole			
99311	$3.00	30	3-Plug
99351	4.50	30	3-Cart.
96352	9.50	60	......
96353	16.00	100	......
4-Pole			
96411	$6.50	30	4-Plug
96451	7.00	30	4-Cart.
96452	13.00	60	......
96453	25.00	100	......

*Box dimensions: 7⅛x5⅛x3⅛ inches.

†Box dimensions: 7⅜x6⅜x3⅛ inches.

Fusible

Open Top Boxes

With shutters for meters having NELA standard terminal chambers.

2-Pole

Cat. No.	Each	Amp.
99252	$8.00	60
99253	14.00	100
3-Pole		
99352	$9.50	60
99353	16.00	100
99354	24.70	200
99355	70.00	400

Not Fusible

Cat. No.	Each	Amp.
2-Pole		
91251	$2.50	30
91252	7.50	60
91253	13.00	100
3-Pole		
91351	$3.50	30
91352	8.00	60
91353	15.00	100
4-Pole		
91451	$6.50	30
91452	11.00	60
91453	21.00	100

Switched and Solid Neutral Switches
Single Throw—Fusible

115-230 Volts A.C., 125-250 Volts D.C.

2-Wire Solid Neutral
(1 Blade, 1 Fuse)

Cat. No.	Each	Amp.	Fuses
97211	$1.90	30	1-Plug
97251	2.30	30	1-Cart.

4-Wire Solid Neutral
(3 Blades, 3 Fuses)

Cat. No.	Each	Amp.	Fuses
97451	$6.75	30	3-Cart.
97412	11.00	60	......
97413	21.00	100	......
97414	33.30	200	......
97415	88.00	400	......
97416	160.00	600	......
97417	340.00	800	......
97418	420.00	1200	......

5-Wire Solid Neutral
(4 Blades, 4 Fuses)

Cat. No.	Each	Amp.	Fuses
97551	$10.00	30	4-Cart.
97512	17.00	60	......
97513	33.00	100	......
97514	53.30	200	......
97515	127.50	400	......
97516	220.00	600	......

3-Wire Solid Neutral
(2 Blades, 2 Fuses)

Cat. No.	Each	Amp.	Fuses
97311	$2.70	30	2-Plug
97351	3.50	30	2-Cart.
97312	8.00	60	......
97313	15.00	100	......
97314	22.00	200	......
97315	68.00	400	......
97316	110.00	600	......
97317	240.00	800	......
97318	340.00	1200	......

3-Wire Switched Neutral
(3 Blades, 2 Fuses)

Cat. No.	Each	Amp.	Fuses
95311	$3.00	30	2-Plug
95351	4.50	30	2-Cart.
97352	9.50	60	......
97353	16.00	100	......
97354	24.70	200	......
97355	70.00	400	......

With Open Top Boxes

With shutters for meters having NELA standard terminal chambers.

3-Wire Solid Neutral
(2 Blades, 2 Fuses)

Cat. No.	Each	Amp.	Fuses
97351	$3.50	30	2-Cart.
99312	8.00	60	......
99313	15.00	100	......
99314	22.00	200	......
99315	68.00	400	......

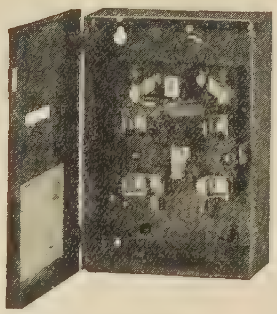
3-Wire Switched Neutral
(3 Blades, 2 Fuses)

Cat. No.	Each	Amp.	Fuses
95311	$3.00	30	2-Plug
95351	4.50	30	2-Cart.
94352	9.50	60	......
94353	16.00	100	......
94354	24.70	200	......
94355	70.00	400	......

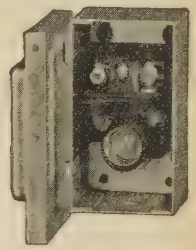
Square D Blue Label Switches

Rotor Disc Type—Front Operated

115-230 Volts A.C., 125-250 Volts D.C.



No. 34302



No. 90211

2-Pole

Cat. No.	Each	Amp.	Fuses	Finish
93211	$2.00	30	2-Plug.	Black
93251	2.50	30	2-Cart.	Black
34302	8.00	60	2-Cart.	Black
2-Wire Solid Neutral (1 Blade, 1 Fuse)				
90211	$1.90	30	1-Plug.	Black
3-Wire Solid Neutral (2 Blades, 2 Fuses)				
90311	$2.70	30	2-Plug.	Black
90351	3.50	30	2-Cart.	Black
34302	8.00	60	2-Cart.	Black

Box dimensions, numbers 90311, 90351, 93211 and 93251, 6⅛x4$\frac{1}{16}$x2⅜ inches. Meter T.O. in top.

Box dimensions, number 34302, 10⅛x6$\frac{15}{16}$x3$\frac{7}{16}$ inches.

Box dimensions, number 90211, 5⅜x3⅛x2⅜ inches.

Square D Motor Starters

Straight Connected—Quick Make and Break
Single Throw—Fusible

The running fuses are shunted by the use of a set of auxiliary blades during the starting period. The circuit is not opened going from the starting to the running position.

Square D cover control makes it impossible to open the cover when the switch is on or to operate switch when the cover is open.

With Cover Control
230 Volts A.C., 250 Volts D.C.

Cat. No.	Each	No. of Poles	Amperes	Box No.	Wt. Lbs.
76251	$17.00	2	30	444-A	15
76351	18.00	3	30	444-A	16
76451	25.00	4	30	448-F	20
76352	25.00	3	60	425-D	24
76452	35.00	4	60	453	33
575 Volts A.C. Equipped with Arc Suppressors					
76341	25.00	3	30	425-D	26
76441	35.00	4	30	453	33

Cover control keys purchased separately.

Without Cover Control
230 Volts A.C., 250 Volts D.C.

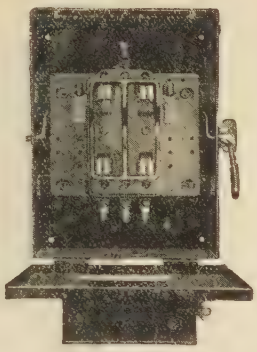
Cat. No.	Each	No. of Poles	Amperes	Box No.	Wt. Lbs.
69251	$15.00	2	30	427	12
69351	16.00	3	30	427	14
69451	23.00	4	30	448-L	19
69352	23.00	3	60	425-P	24
69452	33.00	4	60	453-E	31
575 Volts A.C. Equipped with Arc Suppressors					
69341	$23.00	3	30	425-P	24
69441	33.00	4	30	453-E	31

Square D Meter Service Switches

Accessible Main Fuses
Meter Test and Not-Meter Test

Sequence: Switch-Fuse-Meter

No. 30331, Flap Open



No. 10373, Open

Designed for use in connection with meter service, with the main line fuses so located at the front of the switch, that the customer may have access to them for replacement, after first throwing the switch lever to the Off position then raising the auxiliary cover or flap. Opening the flap does not afford access to the switch mechanism proper, this mechanism being under the main cover and sealed.

Both switch blades and fuses are ahead of the meter and are dead when switch is off.

The switch cannot be put in "on" position until flap is closed, the switching mechanism interlocking with the flap

Customer's service is not interrupted while testing meters when these meter testing devices are used.

Single Phase and D.C.

2 and 3-Wire Service—125 and 250 Volts

Meter Test Cat. No.	Meter Test With Endwall Each	Not Meter Test Cat. No.	Not Meter Test With Endwall Each	Amps.	Volts	Poles	Blades	Fuses	Std. Pkg.
30211	$ 5.85	10211	$ 5.40	30	125	2	2	2P	10
30231	5.30	10231	5.00	30	125	2	1	1P	10
30251	6.90	10251	6.60	30	250	2	2	2C	10
30271	5.70	10271	5.70	30	125	2	1	1C	10
30331	6.50	10331	5.85	30	125–250	3	2	2P	10
30371	6.90	10371	6.60	30	125–250	3	2	2C	10
30252	14.00	10252	10.75	60	250	2	2	2C	4
30272	13.00	10272	10.75	60	125	2	1	1C	4
30372	15.00	10372	10.75	60	125–250	3	2	2C	4
*30312	15.00	*10312	10.75	60	125–250	3	2	2C	4
30253	24.00	10253	19.50	100	250	2	2	2C	2
30273	24.00	10273	19.50	100	125	2	1	1C	2
30373	26.00	10373	19.50	100	125–250	3	2	2C	2
*30313	26.00	*10313	19.50	100	125–250	3	2	2C	2
*30314	64.00	*10314	55.00	200	125–250	3	2	2C	1
*30315	135.00	*10315	120.00	400	125–250	3	2	2C	1
.....	.....	*10316	190.00	600	125–250	3	2	2C	1
.....	.....	*10317	265.00	800	125–250	3	2	2C	1

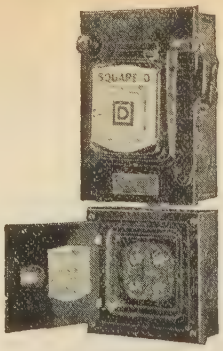
*Switches with visible blades. Test links are parallel and line connections to meter are located on outer edges of base.

Polyphase

Visible Blade Construction

3 and 4-Wire Service—230 Volts A.C.

30391	$18.00	10391	$14.50	30	230	3	3	3C	4
30411	23.00	10411	18.00	30	230	4	3	3C	4
30392	23.50	10392	20.00	60	230	3	3	3C	4
30412	27.00	10412	21.00	60	230	4	3	3C	4
30393	45.00	10393	32.00	100	230	3	3	3C	2
30413	54.00	10413	38.00	100	230	4	3	3C	2
30394	90.00	10394	60.00	200	230	3	3	3C	1
30414	112.00	10414	77.00	200	230	4	3	3C	1
30395	160.00	10395	125.00	400	230	3	3	3C	1
.....	.....	10415	135.00	400	230	4	3	3C	1
.....	.....	10396	200.00	600	230	3	3	3C	1
.....	.....	10416	205.00	600	230	4	3	3C	1
.....	.....	10417	340.00	800	230	4	3	3C	1
.....	.....	10418	475.00	1200	230	4	3	3C	1



No. SK-2189

Square D Meter Service Switches

With Accessible Main Fuses Branch Fuse Cabinets

Attached and Wired

Sequence: Switch-Fuse-Meter

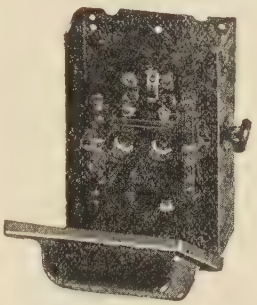
Single-Phase and D.C.

30 Amperes

Cat. No.	Each	Volts	Poles	Blades	Main Fuses	Branch Fuses	Std. Pkg.
SK2187	$8.10	125	2	1	1P	2	10
SK2188	9.00	125	2	1	1P	4	10
SK2391	9.30	125–250	3	2	2P	2	10
SK2189	10.20	125–250	3	2	2P	4	10
SK2233	8.60	125	2	2	2P	2	10
SK2197	9.55	125	2	2	2P	4	10
*SK2392	8.65	125	2	1	1P	2	10
*SK2393	9.55	125	2	1	1P	4	10
*SK2394	9.85	125–250	3	2	2P	2	10
*SK2395	10.75	125–250	3	2	2P	4	10

*Ganging type for banked installations.

Square D Meter Service Switches



No. 36331

With Sealable Main Fuses Meter Test and Not Meter Test

Sequence: Switch-Fuse-Meter

Single-Phase and D.C.

2 and 3-Wire Service 125 and 250 Volts

Meter Test Cat. No.	Meter Test With Endwall Each	Not Meter Test Cat. No.	Not Meter Test With Endwall Each	Amps.	Volts	Poles	Blades	Fuses	Std. Pkg.
36211	$ 4.80	99211	$2.00	30	125	2	2	2P	10
36231	4.10	97211	1.90	30	125	2	1	1P	10
36251	5.55	98251	2.50	30	250	2	2	2C	10
36271	5.20	97251	2.30	30	125	2	1	1C	10
36331	5.10	97311	2.70	30	125–250	3	2	2P	10
36371	5.85	97351	3.50	30	125–250	3	2	2C	10
36252	11.50	99252	8.00	60	250	2	2	2C	4
36272	10.50	.....	.....	60	125	2	1	1C	4
36372	12.50	99312	8.00	60	125–250	3	2	2C	4
*36312	12.50	.....	.....	60	125–250	3	2	2C	4
36253	21.00	99253	14.00	100	250	2	2	2C	2
36273	21.00	.....	.....	100	125	2	1	1C	2
36373	23.00	99313	15.00	100	125–250	3	2	2C	2
*36313	23.00	.....	.....	100	125–250	3	2	2C	2
*36314	55.00	99314	22.00	200	125–250	3	2	2C	1
*36315	125.00	99315	68.00	400	125–250	3	2	2C	1

*Meter test switches with visible blades.

Polyphase

3 and 4-Wire Service—230 Volts

36351	$15.00	SK-671	$6.25	30	230	3	3	3	4
36411	21.50	.....	.....	30	230	4	3	3	4
36352	20.00	SK-672	13.00	60	230	3	3	3	4
36412	25.00	.....	.....	60	230	4	3	3	4
36393	35.00	SK-673	20.00	100	230	3	3	3	2
36413	44.00	.....	.....	100	230	4	3	3	2
36394	75.00	99354	24.70	200	230	3	3	3	1
36414	90.00	.....	.....	200	230	4	3	3	1
36395	170.00	99355	70.00	400	230	3	3	3	1

Square D Meter Switches

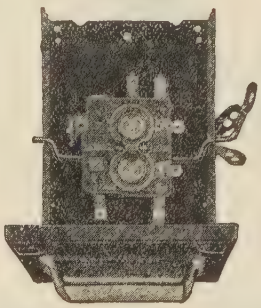
Universal Meter Testing

Sequence: Switch-Fuse-Meter

Single Phase and D.C.

30 Amperes—125 Volts and 125-250 Volts

No. 34311, Open



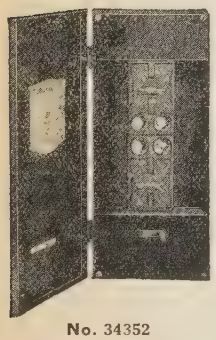
No. 33211, Main Cover Open

Cat. No.	With End Wall Each	Switch and Cutout No. of Poles	No. Blades	No. of Fuses	No. Circuit	Branch Circuits No. of Fuses	No. Fuses in Ea. Cir.	Box No.	Std. Pkg.	Wt. Lbs.
*33211	$5.10	2	1	1	2	2	1	432-M	10	8
†32211	5.10	2	1	1	2	2	1	432-D	10	8
32311	5.50	3	2	2	2	2	1	432-D	10	9
32311	5.50	3	2	2	1	2	2	432-D	10	9
32311	5.50	2	2	2	1	2	2	432-D	10	9
34211	6.25	2	1	1	4	4	1	432-E	10	9
34311	7.00	3	2	2	4	4	1	432-E	10	9
34311	7.00	2	2	2	2	4	2	432-E	10	9

*Same as Cat. No. 32211 except branch fuses in vertical position allowing more wiring space.

†Same as Cat. No. 33211 except branch fuses in horizontal position.

Square D Meter Switches and Range Combinations



Sequence: Meter-Switch-Fuse

60 Amperes

115-230 Volts A.C.

3-Pole Solid Neutral

No. 34352

With Accessible Main Fuses

Cat. No.	With End Each	Poles	Blades	Branch Circuits	Std. Pkg.
*34312	$10.75	3	2	.....	4
34322	12.40	3	2	2–30A	4
34342	14.00	3	2	4–30A	4
34352	18.70	3	2	4–30A, 1–60A	4
†35352	22.00	3	2	4–30A, 1–60A	4
34362	15.70	3	2	6–30A	4
34372	20.85	3	2	6–30A, 1–60A	4

*Switch and 60-ampere main fuse Square D Break only.
†Same as Cat. No. 34352 but for flush mounting.

With Sealable Main Fuses

Main and range fuses equipped with fuse pullers. Nos. SK-2380 and SK-2398 have split main door, permitting access to branch fuses when main fuses are sealed, and have top shutter endwalls. Nos. SK-2434 and SK-2436 have solid door and knockout endwalls.

SK-2434	$15.50	3	2	4–30A, 1–60A	4
SK-2380	15.50	3	2	4–30A, 1–60A	4
SK-2436	18.00	3	2	6–30A, 1–60A	4
SK-2398	18.00	3	2	6–30A, 1–60A	4

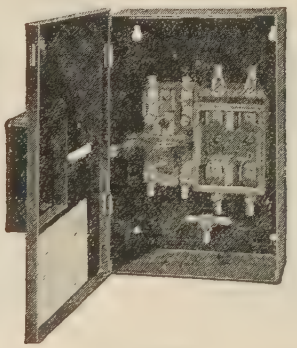
Square D Meter Switches and Range Combinations

With Accessible Main Fuses

Sequence: Switch-Meter-Fuse

With Test Facilities

30-60 Amperes—115-230 Volts A.C.

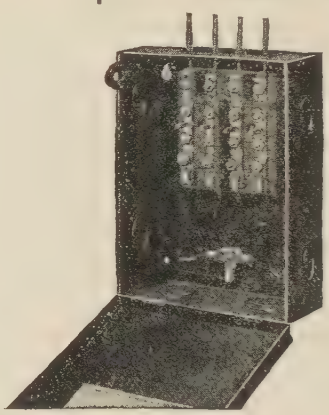


No. 31312

Cat. No.	With End Wall Each	Amp.	Meter Switch Poles	Blades	Branch Circuits 30-Amp. Fuses	60-Amp. Range Fuses	Std. Pkg.
31211	$ 5.30	30	2	1	..	..	10
31311	6.50	30	3	2	..	..	10
*SK2445	8.10	30	2	1	2	..	10
*SK2446	9.00	30	2	1	4	..	10
*SK2447	9.30	30	3	2	2	..	10
*SK2448	10.20	30	3	2	4	..	10
31312	11.00	60	3	2	..	..	4
†31322	17.60	60	3	2	..	2	4
31352	19.00	60	3	2	4	2	4
31372	22.10	60	3	2	6	2	4
31302	23.40	60	3	2	8	2	4
31313	20.00	100	3	2	..	..	2

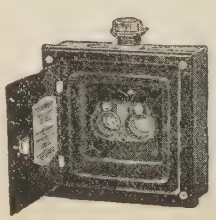
*Combination wired and nippled. †Provided with 60-ampere lugs behind main fuse for service to existing circuits.

Square D Indoor Meter Boxes



*No. 12411 is used on meter control panelboards as a test block and meter trim.
**Nos. 12452, 12461, 12462, 12463 and 12464 are supplied with a blank steel shutter closing the opening at the top of box.
†No. 12372 has plug-in type meter connectors. Box is sealable and contains test links.
‡No. 12392 is a small compact box with a two-in, two-out test block and has removable test links.

Cat. No.	With End Wall Each	Amps.	Volts	Wire	Std. Pkg.
*12411	$4.50	30	125–250	2–3	10
**12461	5.50	30	250–600	2–3	10
†12372	5.50	60	125–250	2–3	4
‡12392	4.50	60	125–250	2–3	4
**12452	7.00	60	125–250	2–3	4
**12462	10.00	60	250–600	2–3	4
**12463	12.00	100	250–600	2–3	2
**12464	17.00	200	250–600	2–3	1



Square D Branch Circuit Attachments

Cat. No.	Unwired Each	Wired Each	Circuits	Std. Pkg.
39271	$2.35	$2.80	2	10
39471	3.25	3.70	4	10
39671	5.75	6.20	6	10

Square D Aluminum Outdoor Meter Boxes

No. 12651
With Cover Removed

Die cast of virgin aluminum and has indefinite life.

Box is 15¾ inches high over all, 8 inches wide, and 8 inches deep.

Has four mounting feet on back. A 1-inch threaded conduit boss at top and 1-inch knockout in back and bottom. Also ½-inch knockout for ground.

Block is two-in, two-out. No cross-over.

Semi-rigid meter connectors included.

Standard package, 4.

No. **12651**, with Test Block.ea. **$7.40**
No. **12641**, without Test Block ....ea. **6.40**
No. **12691**, Test Block Only.... **1.50**

Square D Outdoor Meter Boxes

For 60-Ampere Services

No. 12601, Open Showing Method of Mounting Meter

Dimensions: 20⅞ inches high, 7⅞ inches wide, 7 15/16 inches deep.

No. 12601 has galvanized sheet metal cabinet with one coat of gray enamel and cross over test block, permitting straight connection to meter. Knockouts: Sides, 1-inch; bottoms 1, ½, and 1-inch; back, 1-inch and 1-inch. For concentric knockouts add initial A to Cat. No.

Nos. 12621 and SK 2186 have standard sheet-metal cabinets. Galvanized or cadmium-plated finish at $3.00 each additional.

No. 12621 test block is standard type.

SK2186 is cabinet without test block. Knockouts: Sides, ¾, 1, 1¼-inch (concentric); bottom (¾, 1, 1¼-inch), (½-inch), (¾, 1, 1¼-inch).

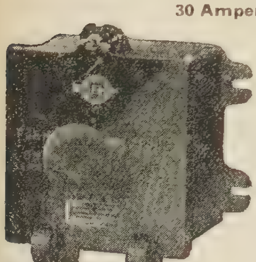
No. SK-2186 is cabinet only without test block, for use by No. 12621.

Cat. No.	Steel Cabinet Each	Galv. or Cad. Plated Each	Std. Pkg.
12601	**$9.00**	......	4
12621	**8.00**	**$11.00**	4
SK-2186	**5.50**	**8.50**	4

No. 7251 Square D Cast Iron Switches

For Cartridge Fuses

30 Amperes, 250 Volts—2-Pole



This switch is enclosed in a cast iron case. Cover interlocks with the mechanism so it cannot be opened when switch is on.

Has brass plunger rods.

Quick make and break action.

Can be gasketed to make switch weatherproof. An end plate is required in each end.

Box No. 401-A.

Weight, 10 pounds.

Cat. No. **7251**.......each **$20.00**

End Plates for Use with Cast Iron Switches

No. 18711

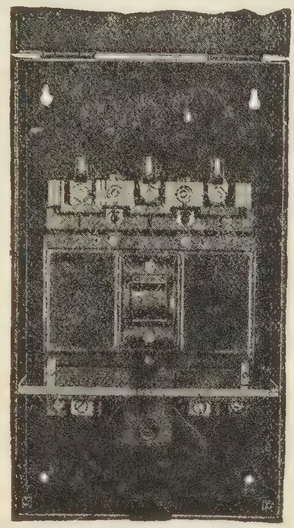
No. 18723

No.	Each	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
18711	**$.50**	For One ½-Inch Conduit	5	4
18712	**.50**	For One ¾-Inch Conduit	5	4
18713	**.50**	For One 1-Inch Conduit	5	4
18714	**.50**	For One 1¼-Inch Conduit	5	4
18721	**.50**	For Two ½-Inch Conduits	5	4½
18722	**.50**	For Two ¾-Inch Conduits	5	4½
18723	**.50**	For Two 1-Inch Conduits	5	4½
19700	**.40**	Blank (Steel)	5	1

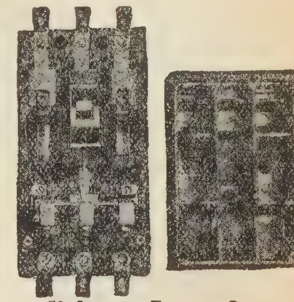
Square D Industrial Nofuze Circuit Breakers

Manually Operable—Quick-Make and Quick-Break

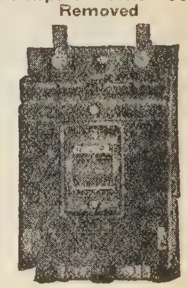
230 Volts A.C., 125-250 Volts D.C.



No. 67316
With Main Cover Open



50-Ampere Frame—Cover Removed



No. 67216 Breaker Removed from Box

50-Ampere Frame

Non-Interchangeable Trip Unit

Flush Mounting Cat. No.	Flush Mounting Each	Surface Mounting Cat. No.	Surface Mounting Each	Amp.	Poles
66215F	**$20.00**	**66215S**	**$18.00**	15	2
66315F	**25.00**	**66315S**	**23.00**	15	3
66220F	**20.00**	**66220S**	**18.00**	20	2
66320F	**25.00**	**66320S**	**23.00**	20	3
66225F	**20.00**	**66225S**	**18.00**	25	2
66325F	**25.00**	**66325S**	**23.00**	25	3
66235F	**22.00**	**66235S**	**20.00**	35	2
66335F	**27.00**	**66335S**	**25.00**	35	3
66250F	**22.00**	**66250S**	**20.00**	50	2
66350F	**27.00**	**66350S**	**25.00**	50	3

100-Ampere Frame

Interchangeable Trip Unit

Flush Mounting Cat. No.	Flush Mounting Each	Surface Mounting Cat. No.	Surface Mounting Each	Amp.	Poles
67250F	**$40.50**	**67250S**	**$38.00**	50	2
67350F	**50.50**	**67350S**	**48.00**	50	3
67270F	**41.50**	**67270S**	**39.00**	70	2
67370F	**52.50**	**67370S**	**50.00**	70	3
67290F	**43.50**	**67290S**	**41.00**	90	2
67390F	**54.50**	**67390S**	**52.00**	90	3
67216F	**44.50**	**67216S**	**42.00**	100	2
67316F	**56.50**	**67316S**	**54.00**	100	3

225-Ampere Frame / 600-Ampere Frame

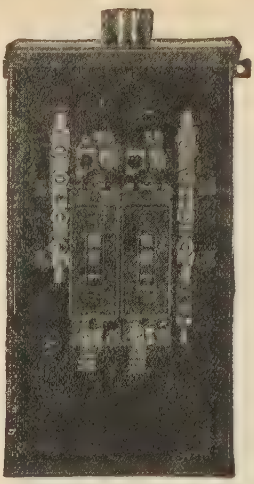
Interchangeable Trip Unit / **Interchangeable Trip Unit**

225 Flush Mounting Cat. No.	Each	225 Surface Mounting Cat. No.	Each	Amp.	Poles	600 Surface Mounting Only Cat. No.	Each	Amp.	Poles
68250F	**$92.00**	**68250S**	**$89.00**	50	2	**69227**	**$241.00**	225	2
68350F	**112.00**	**68350S**	**109.00**	50	3	**69327**	**282.00**	225	3
68270F	**92.00**	**68270S**	**89.00**	70	2	**69228**	**251.00**	250	2
68370F	**112.00**	**68370S**	**109.00**	70	3	**69328**	**294.00**	250	3
68290F	**92.00**	**68290S**	**89.00**	90	2	**69237**	**260.00**	325	2
68390F	**112.00**	**68390S**	**109.00**	90	3	**69337**	**306.00**	325	3
68216F	**92.00**	**68216S**	**89.00**	100	2	**69246**	**270.00**	400	2
68316F	**112.00**	**68316S**	**109.00**	100	3	**69346**	**318.00**	400	3
68217F	**94.00**	**68217S**	**91.00**	125	2	**68248**	**279.00**	450	2
68317F	**115.00**	**68317S**	**112.00**	125	3	**69348**	**330.00**	450	3
68218F	**96.00**	**68218S**	**93.00**	150	2	**69256**	**289.00**	500	2
68318F	**117.00**	**68318S**	**114.00**	150	3	**69356**	**341.00**	500	3
68219F	**97.00**	**68219S**	**94.00**	175	2	**69258**	**298.00**	550	2
68319F	**119.00**	**68319S**	**116.00**	175	3	**69358**	**353.00**	550	3
68226F	**99.00**	**68226S**	**96.00**	200	2	**69266**	**308.00**	600	2
68326F	**122.00**	**68326S**	**119.00**	200	3	**69366**	**365.00**	600	3
68227F	**101.00**	**68227S**	**98.00**	225	2	.....	......	...	.
68327F	**124.00**	**68327S**	**121.00**	225	3	.....	......	...	.

Surface covers hinged. Flush covers removable.

Square D Circuit Breakers
With Weatherproof Flipons
Quick-Make and Quick-Break

No. 63650



No. 60950
Cover Removed

For general outdoor use. In steel, rust resisting cabinets.

2-Pole, 1 Single-Pole Flipon, Solid Neutral
1 Handle, One 1-Inch Pipe Fitting

Meter Test Cat. No.	Meter Test Each	Test Links	Not Meter Test Cat. No.	Not Meter Test Each	Amp.	Volts
60415	$8.95	1	63415	$8.25	15	125
60420	8.95	1	63420	8.25	20	125
60425	8.95	1	63425	8.25	25	125
60435	9.60	1	63435	8.90	35	125
60450	9.60	1	63450	8.90	50	125
3-Pole, 2 Single-Pole Flipons, Solid Neutral — 2 Handles, One 1-Inch Pipe Fitting						
60915	$14.40	2	63915	$13.00	15	125–250
60920	14.40	2	63920	13.00	20	125–250
60925	14.40	2	63925	13.00	25	125–250
60935	15.70	2	63935	14.30	35	125–250
60950	15.70	2	63950	14.30	50	125–250
3-Pole, 1 Double-Pole Flipon, Solid Neutral — 1 Handle, One 1-Inch Pipe Fitting						
60615	$14.90	2	63615	$13.50	15	125–250
60620	14.90	2	63620	13.50	20	125–250
60625	14.90	2	63625	13.50	25	125–250
60635	15.65	2	63635	14.25	35	125–250
60650	15.65	2	63650	14.25	50	125–250

Square D Circuit Breakers
With Explosion Resisting Flipons
Cast Malleable Enclosed

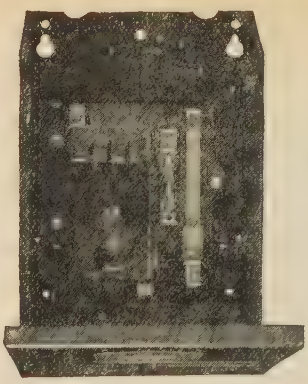
For Lighting and Motor Circuits
In Class 1 Group D and Class 2 Group G Hazardous Locations
125, 125-250 Volts A.C. or D.C.

No. 62215

1 Single-Pole Flipon
1 Conduit Hub Each End

Cat. No.	Each	Amp.	Conduit Hubs In.
62115	$25.55	15	½
62120	25.55	20	½
62125	25.55	25	¾
62135	26.20	35	¾
62150	26.20	50	1
1 Double-Pole Flipon — 1 Conduit Hub Each End			
62215	$34.20	15	½
62220	34.20	20	½
62225	34.20	25	¾
62235	34.95	35	¾
62250	35.25	50	1
1 Double-Pole Flipon — 2 Conduit Hubs One End Only			
62915	$34.20	15	½
62920	34.20	20	½
62925	34.20	25	¾
62935	34.95	35	¾
62950	35.25	50	1

Square D Meter Service Breakers



Single-Phase or D.C. Service

Quick Make and Quick Break

2 and 3-Pole Solid Neutral
125, 125-250 Volts

Insulated Neutral

2-Wire, Solid Neutral, Single Pole Flipon

Meter Test Cat. No.	Meter Test With Endwall Each	Meter Test Without Endwall Each	Not Meter Test Cat. No.	Not Meter Test With Endwall Each	Not Meter Test Without Endwall Each	Amps.
60215	$8.20	$7.80	63215	$7.50	$7.10	15
60220	8.20	7.80	63220	7.50	7.10	20
60225	8.20	7.80	63225	7.50	7.10	25
60235	8.85	8.45	63235	8.15	7.75	35
60250	8.85	8.45	63250	8.15	7.75	50
3-Wire, Solid Neutral, Double Pole Flipon						
60315	$14.15	$13.75	63315	$12.75	$12.35	15
60320	14.15	13.75	63320	12.75	12.35	20
60325	14.15	13.75	63325	12.75	12.35	25
60335	14.90	14.50	63335	13.50	13.10	35
60350	14.90	14.50	63350	13.50	13.10	50
3-Wire, Solid Neutral, Two Single Pole Flipons						
60015	$13.65	$13.25	63015	$12.25	$11.85	15
60020	13.65	13.25	63020	12.25	11.85	20
60025	13.65	13.25	63025	12.25	11.85	25
60035	14.95	14.55	63035	13.55	13.15	35
60050	14.95	14.55	63050	13.55	13.15	50

Square D Circuit Breakers
With Industrial Flipons
Inverse Time Element, Trip Free

Quick-Make Quick-Break

One Single-Pole Flipon
125 Volts A.C. or D.C.—Single Handle

No. 61015
Cover Removed

Cat. Nos. Flush Mounting	Cat. Nos. Surface Mounting	Each	Amp.
61115F	61115S	$6.75	15
61120F	61120S	6.75	20
61125F	61125S	6.75	25
61135F	61135S	7.40	35
61150F	61150S	7.40	50
Two Single-Pole Flipons — 125-250 Volts A.C. or D.C.—Two Handles			
61815F	61815S	$11.80	15
61820F	61820S	11.80	20
61825F	61825S	11.80	25
61835F	61835S	13.10	35
61850F	61850S	13.10	50
One Double-Pole Flipon — 125-250 Volts A.C. or D.C.—One Handle			
61715F	61715S	$12.30	15
61720F	61720S	12.30	20
61725F	61725S	12.30	25
61735F	61735S	13.05	35
61750F	61750S	13.05	50

Finish, surface cover, black; flush cover, gray.

GraybaR QUALITY SINCE 1869
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

No. 10323

Bull Dog Type A Safety Switches

Safety Interlocks
Quick-Make
Quick-Break
Single Throw
Fusible

(Switches 800 Amps. and above Non-Interlocking)

Black enamel finish; luminized finish can be furnished at 5% additional.

†2-Pole, 250 Volts D.C., 230 Volts A.C.

Cat. No.	Each	Amps.	H.P. Rating	Wt. Lbs.	Box Ref. No.
10221	$12.00	30	3	15	109
10222	15.00	60	5	16	109
10223	23.00	100	10	27	102
10224	40.00	200	....	48	114
10225	90.00	400	....	74	121
10226	130.00	600	....	114	123
10227	220.00	800	....	117	124
10228	305.00	1200	....	225	127D8

†3-Pole, 230 Volts A.C.

10321	$15.00	30	3	21	111
10322	20.00	60	5	22	111
10323	30.00	100	10	34	113
10324	45.00	200	25	62	115
10325	100.00	400	....	98	117
10326	155.00	600	....	156	124
10327	300.00	800	....	274	125
10328	385.00	1200	....	377	126D8

3-Pole, Switched Neutral, 125-250 Volts
3 Blades, 2 Fuse Connections

11321	$15.00	30		21	111
11322	20.00	60		22	111
11323	30.00	100	....	34	113
11324	45.00	200	....	62	115
11325	100.00	400	....	98	117
11326	155.00	600	....	156	124
11327	300.00	800	....	274	125
11328	385.00	1200	....	377	126D8

†4-Pole, 230 Volts A.C.

10421	$18.00	30	3	25	106TR
10422	24.00	60	7½	26	106TR
10423	40.00	100	15	59	115
10424	60.00	200	30	94	117
10425	130.00	400	....	116	124
10426	205.00	600	....	195	125
*10427	385.00	*800	....	370	.....
*10428	510.00	*1200	....	525	.....

2-Pole, 600 Volts D.C.

10261	$18.00	30	5	32	113D
10262	19.00	60	15	33	113D
10263	30.00	100	25	52	122
10264	47.00	200	50	77	121D
10265	110.00	400	....	128	124
10266	175.00	600	....	148	124
*10267	270.00	*800	....	...	.....
*10268	380.00	*1200	....	...	.....

3-Pole, 575 Volts A.C.

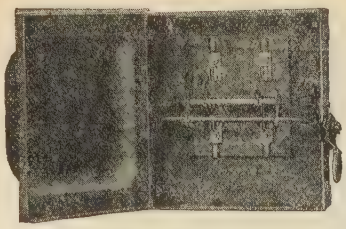
10351	$22.00	30	7½	28	110
10352	23.00	60	15	29	110
10353	35.00	100	30	36	113
10354	58.00	200	50	67	115
10355	120.00	400	....	142	124
10356	200.00	600	....	159	124
*10357	350.00	*800	....	289	125
*10358	460.00	*1200	....	402	126D8

4-Pole, 575 Volts A.C.

10451	$27.00	30	10	25	105
10452	29.00	60	20	34	105
10453	46.00	100	40	68	115
10454	70.00	200	50	96	117
10455	155.00	400	....	145	124
10456	240.00	600	....	210	125
*10457	450.00	*800	....	...	.....
*10458	575.00	*1200	....	...	.....

*Quick-break only.
†Furnished also in 1800 and 2400 amperes.

Bull Dog Type A Safety Switches



Safety Interlocks
Quick-Make
Quick-Break
Single Throw
Not Fusible

(Switches 800 Amps. and above are Non-Interlocking)

Black enamel finish; luminized finish can be furnished at 5% additional.

2-Pole, 250 Volts D.C., 230 Volts A.C.

Cat. No.	Each	Amps.	H.P. Rating	Wt. Lbs.	Box Ref. No
13222	$11.00	30–60	5	15	109
13223	22.00	100	10	19	112
13224	28.00	200	20	32	102D
13225	60.00	400	....	62	122
13226	100.00	600	....	70	122D
13227	195.00	800	....	110	117D
13228	265.00	1200	....	180	124 D8
*13229	460.00	*1800	....	...	.....
*13220	580.00	*2400	....	...	.....

2-Pole, 600 Volts D.C., 575 Volts A.C., with Arc Chokers

13262	$15.00	30–60	15	29	105D
13263	23.00	100	25	48	122
13264	31.00	200	50	58	122D
13265	90.00	400	....	80	117D
13266	130.00	600	....	116	117D

3-Pole, 575 Volts A.C., with Arc Chokers

†13321	$13.00	†30	....	15	112
13352	18.00	30–60	25	17	112
13353	27.00	100	30	24	106
13354	38.00	200	50	38	105D
13355	100.00	400	....	74	120
13356	160.00	600	....	101	117D
13357	260.00	800	....	168	124
13358	350.00	1200	....	254	125 D8
*13359	615.00	*1800	....	...	.....
*13350	845.00	*2400	....	...	.....

4-Pole, 575 Volts A.C., with Arc Chokers

†13421	$18.00	†30	....	20	111TR
13452	24.00	30–60	30	21	111TR
13453	35.00	100	40	35	105
13454	51.00	200	50	68	120
13455	130.00	400	....	112	117D
13456	195.00	600	....	130	117D
13457	335.00	800	....	220	.....
*13458	460.00	*1200	....	300	.....
*13459	895.00	*1800	....	...	.....
*13450	1110.00	*2400	....	...	.....

Double Throw, Not Fusible, Quick-Break
2-Pole, 250 Volts D.C., 230 Volts A.C.

‡63221	$13.00	‡30	....	14	101D
23222	17.00	30–60	3	21	111
23223	30.00	100	5	29	110
23224	42.00	200	10	40	113D
23225	120.00	400	....	73	121
23226	170.00	600	....	103	120D

3-Pole, 230 Volts A.C.

‡63321	$15.00	‡30	....	17	101D
23322	20.00	30–60	5	25	106
23323	37.00	100	7½	40	105
23324	61.00	200	15	63	118
23325	160.00	400	....	105	117
23326	224.00	600	....	123	117D

4-Pole, 230 Volts A.C.

‡63421	$22.00	‡30	....	19	112
23422	32.00	30–60	5	26	106TR
23423	66.00	100	7½	73	118
23424	96.00	200	15	79	120
23425	216.00	400	....	128	124
23426	280.00	600	....	188	125

2-Pole, 600 Volts D.C., 575 Volts A.C., with Arc Chokers

23262	$19.00	30–60	....	31	105D
23263	33.00	100	....	55	122
23264	47.00	200	....	80	117D
23265	135.00	400	....	...	.....
23266	190.00	600	....	...	.....

3-Pole, 575 Volts A.C., with Arc Chokers

23352	$22.00	30–60	10	25	106
23353	40.00	100	15	40	105
23354	65.00	200	30	63	118
23355	170.00	400	....	105	117
23356	246.00	600	....	123	124

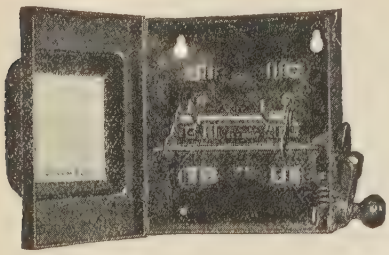
4-Pole, 575 Volts A.C., with Arc Chokers

23452	$35.00	30–60	10	26	106TR
23453	75.00	100	15	73	118
23454	105.00	200	30	79	120
23455	235.00	400	....	128	124
23456	305.00	600	....	188	125

*Quick-break only.
†230 Volts A.C. only, no arc chokers.
‡Type C non-interlocking.

Bull Dog Type C Safety Switches

Non-Interlocking, Quick-Make, Quick-Break Single Throw, Fusible



No. 50221S

Bull Dog Type C (punched clip) externally operated switches are designed for use where severe service conditions do not exist to warrant investment in the more ruggedly constructed, machine made, Type A Switch.

Quick-make and quick-break is a feature of the Bull Dog Type C line. As a safety factor quick-make is more important than quick-break, as it prevents unintentional operation of the switch, because of the conscious effort required to compress the quick-make spring.

Only one spring is used to perform both the functions of quick-make and quick-break. The operation of the switch is not dependent on this spring, however. The switch could be operated if the spring broke or were removed.

The blade and crossbar construction is unique. There is no chance for a blade to remain in contact after the handle is pulled to the "off" position.

Black enamel finish; luminized finish can be furnished at additional 10 per cent.

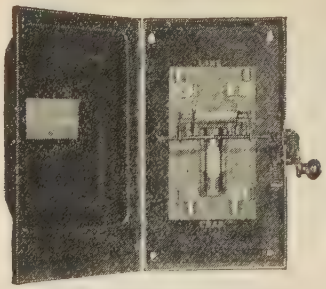
2-Pole, 250 Volts D.C.

Cat. No.	Each	Amps.	H.P. Rating	Std. Pkg.	Wt., Lbs. Each	Box Ref. No.
*50221P	$4.00	*30	2	5	6	100
†50221S	4.00	†30	2	5	6	100
50221	6.00	30	2	5	6	100
50222	10.00	60	5	5	13	109
50223	16.00	100	10	3	24	102
50224	22.00	200	....	2	48	114
50225	64.00	400	....	1	74	121
50226	99.00	600	....	..	114	.....
			3-Pole, 230 Volts, A.C.			
*50321P	$6.00	*30	3	5	10	101
†50321S	6.00	†30	3	5	10	101
50322	11.00	60	5	5	20	111
50323	20.00	100	10	3	31	113
50324	29.00	200	25	2	66	115
50325	74.00	400	....	1	97	117
50326	115.00	600	....	..	155	.....
			4-Pole, 230 Volts A.C.			
50421S	$13.00	30	3	5	13	109TR
50422	15.00	60	7½	3	25	106TR
50423	30.00	100	15	2	58	105
50424	48.00	200	30	1	90	120
50425	105.00	400	....	1	116	124
50426	165.00	600	....	..	195	.....
			3-Pole, Switched Neutral, 125-250 Volts			
			3 Blades, 2 Fuse Connections			
51321	$6.00	30	....	5	10	101
51322	11.00	60	....	5	20	111
51323	20.00	100	....	3	31	113
51324	29.00	200	....	2	66	115
51325	74.00	400	....	1	97	117
51326	115.00	600	....	..	155	.....
			3-Pole, 575 Volts A.C., with Arc Chokers			
50351	$12.00	30	7½	5	26	110
50352	15.00	60	15	3	27	110
50353	28.00	100	30	2	39	113
50354	42.00	200	50	2	68	.....
			4-Pole, 575 Volts A.C., with Arc Chokers			
50451	$20.00	30	10	5	32	105
50452	22.00	60	20	3	33	105
50453	40.00	100	40	2	68	115
50454	57.00	200	50	1	96	117

*Porcelain base switch with removable end plate.
†Porcelain base switch with solid end box.

Bull Dog Type C Safety Switches

Quick-Make, Quick-Break



Non-Interlocking Single Throw, Fusible

With the exception of 400-ampere and over, the 3-pole switches listed below are equipped with removable end plate at top.

Black enamel finish; luminized finish can be furnished at 10% additional.

3-Pole, Solid Neutral, 125-250 Volts
2 Blades, 2 Fuse Connections

Cat. No.	Each	Amps.	Std. Pkg.	Wt., Lbs. Each	Box Ref. No
52322	$10.00	60	5	11	109
52323	16.00	100	3	22	111
52324	25.00	200	2	43	113D
52325	70.00	400	1	95	122
52326	110.00	600	1	120	121D
52327	200.00	800	1	265	124D8
52328	270.00	1200	1	360	127D8
		4-Pole, Solid Neutral, 115-230 Volts A.C.			
		3 Blades, 3 Fuse Connections			
52421	$9.00	30	5	12	101
52422	12.50	60	5	23	111
52423	22.50	100	3	56	113
52424	40.00	200	2	88	115
52425	90.00	400	1	112	124
52426	160.00	600	1	190	124
52427	340.00	800	1	365	.....
52428	420.00	1200	1	520	.....
		5-Pole, Solid Neutral, 115-230 Volts A.C.			
		4 Blades, 4 Fuse Connections			
52521	$14.00	15	5	15	101
52522	22.00	25	5	25	106TR
52523	39.50	67	3	67	105
52524	56.00	93	2	93	120
52525	134.00	164	1	164	124
52526	220.00	198	1	198	125

Bull Dog Type C Safety Switches

Non-Interlocking, Quick-Make, Quick-Break Single Throw, Not Fusible

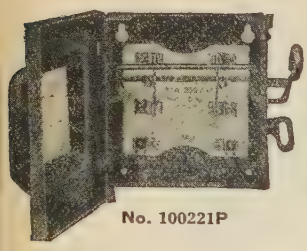
Black enamel finish; luminized finish can be furnished at 10% additional.

2-Pole, 250 Volts D.C.

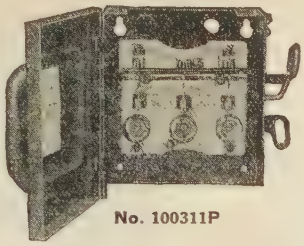
Cat. No.	Each	Amps.	H.P. Rating	Std. Pkg.	Wt. Lbs. Each	Box Ref. No.
*53221S	$4.00	*30	3	5	6	100
53222	9.00	30–60	5	5	13	109
53223	16.00	100	7½	3	17	112
53224	21.00	200	10	2	31	102D
53225	45.00	400	....	1	61	122
53226	76.00	600	....	..	70	.....
			3-Pole, 230 Volts A.C.			
*53321S	$6.00	*30	3	5	10	101
53322	10.00	30–60	5	5	16	112
53323	17.00	100	10	3	23	106
53324	25.00	200	25	2	38	105D
53325	57.00	400	....	1	74	120
53326	90.00	600	....	..	101	.....
			4-Pole, 230 Volts A.C.			
53422	$15.00	30–60	10	5	21	109TR
53423	27.00	100	15	3	34	111TR
53424	42.00	200	30	2	50	106TR
53425	75.00	400	....	1	110	118
53426	150.00	600	....	1	130	117D
			3-Pole, 575 Volts A.C., with Arc Chokers			
53352	$12.00	30–60	15	1	16	112
53353	22.00	100	30	1	23	106
53354	32.00	200	50	1	38	105D
			4-Pole, 575 Volts A.C., with Arc Chokers			
53452	$20.00	30–60	20	1	21	111TR
53453	31.00	100	40	1	34	106TR
53454	47.00	200	50	1	50	118

*Porcelain base.

Bull Dog Type D General Service Safety Switches



No. 100221P



No. 100311P

Black enamel finish; luminized finish can be furnished at 10% additional.

Suffix P in Cat. No. denotes porcelain base switch with removable end plate.

Suffix S in Cat. No. denotes porcelain base switch with solid end box.

Fusible, Single Throw
125-250 Volts D.C., 230 Volts A.C.

2-Pole

Cat. No.	Each	Amps.	Fuse Connections	Std. Pkg.	Wt., Lbs. Each	Box Ref. No.
100211P	$2.00	30	2 Plug	5	5	100
100211S	2.00	30	2 Plug	5	5	100
102211P	1.90	30SN	1 Plug	5	5	100
100221P	2.50	30	2 Cart.	5	5	100
100221S	2.50	30	2 Cart.	5	5	100
			Quick-Break			
50222D	$8.00	60	.....	5	14	109
50223D	14.00	100	.....	3	25	102
			3-Pole			
100311P	$3.00	30	3 Plug	5	6	100
100311S	3.00	30	3 Plug	5	6	100
100321P	4.50	30	3 Cart.	5	10	101
100321S	4.50	30	3 Cart.	5	10	101
			Quick-Break			
50322D	$9.50	60	3 Cart.	5	20	111
50323D	16.00	100	3 Cart.	3	31	113
			4-Pole			
50421SD	$7.00	30	4 Cart.	5	12	109TR
50422D	13.00	60	4 Cart.	3	24	106TR
50423D	25.00	100	4 Cart.	2	57	105
3-Pole Switched Neutral 3 Blades 2 Fuse Connections						
101311P	$3.00	30	2 Plug	5	6	100
101321P	4.50	30	2 Cart.	5	6	100
			Quick-Break			
51322D	$9.50	60	2 Cart.	5	14	111
51323D	16.00	100	2 Cart.	3	30	113
3-Pole Solid Neutral 2 Blades 2 Fuse Connections						
102311P	$2.70	30	2 Plug	5	6	100
102321P	3.50	30	2 Cart.	5	10	100
			Quick-Break			
52322D	$8.00	60	2 Cart.	5	11	109
52323D	15.00	100	2 Cart.	3	22	111
4-Pole Solid Neutral 3 Blades 3 Fuse Connections						
52421D	$6.75	30	4 Cart.	5	12	101
52422D	11.00	60	.....	5	23	111
52423D	21.00	100	.....	3	56	113
5-Pole Solid Neutral 4 Blades 4 Fuse Connections						
52521D	$10.00	30	4 Cart.	5	15	101
52522D	17.00	60	.....	5	25	106TR
52523D	33.00	100	.....	3	67	105

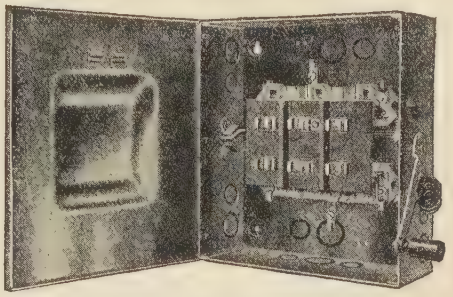
Not Fusible, Single Throw
250 Volts D.C., 230 Volts A.C.

2-Pole

Cat. No.	Each	Amps.	Std. Pkg.	Wt. Lbs. Each	Box Ref. No.
103221P	$2.50	30	5	5	100
103221S	2.50	30	5	5	100
		Quick-Break			
53222D	$7.50	30–60	5	13	109
53223D	13.00	100	3	17	112
		3-Pole			
53321SD	$3.50	30	5	10	101
53322D	8.00	60	5	16	112
53323D	15.00	100	3	23	106
		4-Pole			
53421SD	$6.50	30	5	11	109TR
53422D	11.00	60	3	21	111TR
53423D	21.00	100	2	34	106TR

Type A Colt-Noark Quadbreak Switches

Quick-Make and Quick-Break—Single Throw



No. 74236

Fusible—Cover Interlock

Cat. No.	Each	Amps.	H.P.	Volts	Poles	Wt. Lbs.
*27223	$12.00	30	2	250 A.C. or D.C.	2	6
*27233	15.00	30	3	230 A.C.	3	7½
*27243	18.00	30	3	230 A.C.	4	9½
74226	15.00	60	3	250 A.C. or D.C.	2	14
74236	20.00	60	5	230 A.C.	3	17
75746	24.00	60	7½	230 A.C.	4	20
75721	23.00	100	15	250 A.C. or D.C.	2	20
75731	30.00	100	10	230 A.C.	3	28
75741	40.00	100	15	230 A.C.	4	37
75722	40.00	200	30	250 A.C. or D.C.	2	60
*27232	45.00	200	25	230 A.C.	3	50
75742	60.00	200	30	230 A.C.	4	90
75724	90.00	400	....	250 A.C. or D.C.	2	130
75734	100.00	400	....	230 A.C.	3	160
75744	130.00	400	....	230 A.C.	4	190
75727	130.00	600	....	250 A.C. or D.C.	2	200
75737	155.00	600	....	230 A.C.	3	260
75747	205.00	600	....	230 A.C.	4	340
75728	220.00	800	....	250 A.C. or D.C.	2	325
75738	300.00	800	....	230 A.C.	3	435
75748	385.00	800	....	230 A.C.	4	545
75729	305.00	1200	....	250 A.C. or D.C.	2	510
75739	385.00	1200	....	230 A.C.	3	680
75749	510.00	1200	....	230 A.C.	4	850

Solid Neutral—Plain Cover

3-Pole—2 Blades—2 Poles Fusible

*25733	$14.00	30	3	125–250 or 230 A. C.	3	6
75536	17.00	60	7½	125–250 or 230 A. C.	3	17
75531	27.00	100	15	125–250 or 230 A. C.	3	24
75532	44.00	200	30	125–250 or 230 A. C.	3	50
75534	100.00	400	....	125–250 or 230 A. C.	3	163
75537	145.00	600	..	125–250 or 230 A. C.	3	235
75538	240.00	800	..	125–250 or 230 A. C.	3	325
75539	340.00	1200	..	125–250 or 230 A. C.	3	510

4-Pole—3 Blades—3 Poles Fusible

*25743	$18.00	30	3	230 A. C.	4	7½
75546	23.00	60	7½	230 A. C.	4	24
75541	36.00	100	15	230 A. C.	4	35½
*25742	55.00	200	30	230 A. C.	4	52
75544	115.00	400	..	230 A. C.	4	193
75547	175.00	600	..	230 A. C.	4	325
75548	340.00	800	..	230 A. C.	4	435
75549	420.00	1200	..	230 A. C.	4	680

5-Pole—4 Blades—4 Poles Fusible

*25753	$21.00	30	3	115–230 A. C.	5	10
75556	27.00	60	7½	115–230 A. C.	5	31½
75551	45.00	100	15	115–230 A. C.	5	42
75552	70.00	200	30	115–230 A. C.	5	121
75554	145.00	400	..	115–230 A. C.	5	223
75557	225.00	600	..	115–230 A. C.	5	415

*Dualbreak.

Type A Colt-Noark Quadbreak Switches

Quick-Make and Quick-Break—Single Throw

Fusible—Cover Interlock

Cat. No.	Each	Amps.	H.P.	Volts	Poles	Wt. Lbs.
75923	$18.00	30	5	575 A.C. or 600 D.C.	2	11
75933	22.00	30	7½	575 A.C.	3	13
75943	27.00	30	10	575 A.C.	4	15½
74426	19.00	60	10	575 A.C. or 600 D.C.	2	14
74436	23.00	60	15	575 A.C.	3	17
75946	29.00	60	20	575 A.C.	4	20
75921	30.00	100	30	575 A.C. or 600 D.C.	2	22
75931	35.00	100	30	575 A.C.	3	30
75941	46.00	100	40	575 A.C.	4	39
75922	47.00	200	50	575 A.C. or 600 D.C.	2	63
75932	58.00	200	50	575 A.C.	3	56
75942	70.00	200	50	575 A.C.	4	95
75924	110.00	400	....	575 A.C. or 600 D.C.	2	135
75934	120.00	400	....	575 A.C.	3	165
75944	155.00	400	....	575 A.C.	4	200
75927	175.00	600	....	575 A.C. or 600 D.C.	2	205
75937	200.00	600	....	575 A.C.	3	267
75947	240.00	600	....	575 A.C.	4	350
75928	270.00	800	....	575 A.C. or 600 D.C.	2	325
75938	350.00	800	....	575 A.C.	3	440
75948	450.00	800	....	575 A.C.	4	550
75929	380.00	1200	....	575 A.C. or 600 D.C.	2	515
75939	460.00	1200	....	575 A.C.	3	690
75949	575.00	1200	....	575 A.C.	4	860

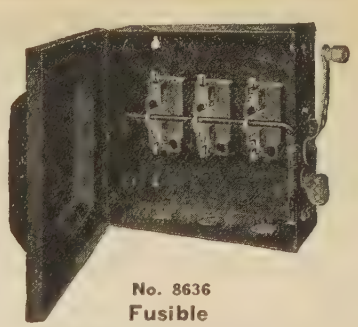
Switches with solid switching neutral can be supplied at same price as those of the same capacity with all poles fusible.

Non-Fusible—Cover Interlock

70923	$11.00	30	5	575 A.C. or 600 D.C.	2	11
70933	13.00	30	10	{250–600 D.C.}	3	13
70943	18.00	30	10	{230–575 A.C.}	4	15½
71426	15.00	60	10	575 A.C. or 600 D.C.	2	14
71436	18.00	60	25	{250–600 D.C.}	3	17
70946	24.00	60	25	{230–575 A.C.}	4	20
70921	23.00	100	40	575 A.C. or 600 D.C.	2	20
70931	27.00	100	40	{250–600 D.C.}	3	28
70941	35.00	100	40	{230–575 A.C.}	4	37
70922	31.00	200	50	575 A.C. or 600 D.C.	2	60
70932	38.00	200	50	{250–600 D.C.}	3	56
70942	51.00	200	50	{230–575 A.C.}	4	90
70924	90.00	400	..	575 A.C. or 600 D.C.	2	130
70934	100.00	400	..	{250–600 D.C.}	3	160
70944	130.00	400	..	{230–575 A.C.}	4	190
70927	130.00	600	..	575 A.C. or 600 D.C.	2	200
70937	160.00	600	..	{250–600 D.C.}	3	260
70947	195.00	600	..	{230–575 A.C.}	4	340
70928	195.00	800	..	575 A.C. or 600 D.C.	2	325
70938	260.00	800	..	{250–600 D.C.}	3	435
70948	335.00	800	..	{230–575 A.C.}	4	545
70929	265.00	1200	..	575 A.C. or 600 D.C.	2	510
70939	350.00	1200	..	{250–600 D.C.}	3	680
70949	460.00	1200	..	{230–575 A.C.}	4	850

Type C Colt-Noark Nublade Switches

Quick-Make and Quick-Break—Single Throw



No. 8636

Fusible

230 Volts A.C., 250 Volts D.C.

Cat. No.	Each	Amps.	H.P.	Poles	Wt. Lbs.
8223	$4.00	30	2	2	5
8233	6.00	30	3	3	6
8933	6.00	30	3	3SWN	6½
8243	13.00	30	3	4	9½
8226	10.00	60	3	2	12
8236	11.00	60	5	3	16
8936	11.00	60	5	3SWN	16
8246	15.00	60	7½	4	20
8221	16.00	100	10	2	19½
8231	20.00	100	10	3	25½
8931	20.00	100	10	3SWN	25½
8241	30.00	100	15	4	30
8222	22.00	200	20	2	37
8232	29.00	200	25	3	49
8932	29.00	200	25	3SWN	48
8242	48.00	200	25	4	63
8224	64.00	400	...	2	88
8234	74.00	400	...	3	133
8934	74.00	400	...	3SWN	121
8244	105.00	400	...	4	170
8227	99.00	600	...	2	127
8237	115.00	600	...	3	180
8937	115.00	600	...	3SWN	165
8247	165.00	600	...	4	247
		575 Volts A.C.			
8433	$12.00	30	...	3	10
8443	20.00	30	...	4	13¾
8436	15.00	60	...	3	18
8446	22.00	60	...	4	22
8431	28.00	100	...	3	29
8441	40.00	100	...	4	35
8432	42.00	200	...	3	58
8442	57.00	200	...	4	89

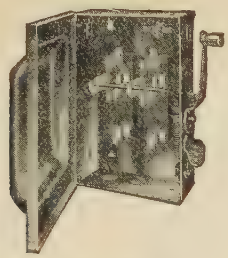
Non-Fusible

230 Volts A.C., 250 Volts D.C.

8723	$4.00	30	2	2	5
8733	6.00	30	3	3	6½
8743	11.00	30	5	4	9
8726	9.00	60	5	2	12
8736	10.00	60	5	3	15½
8746	15.00	60	10	4	18
8721	16.00	100	10	2	17½
8731	17.00	100	10	3	23
8741	27.00	100	15	4	26
8722	21.00	200	20	2	35
8732	25.00	200	25	3	45
8742	42.00	200	25	4	55
8724	45.00	400	...	2	65
8734	57.00	400	...	3	100
8744	75.00	400	...	4	135
8727	76.00	600	...	2	85
8737	90.00	600	...	3	120
8747	150.00	600	...	4	155
		575 Volts A.C.			
8633	$9.00	30	...	3	9
8643	12.00	30	...	4	10
8636	12.00	60	...	3	15½
8646	20.00	60	...	4	18
8631	22.00	100	...	3	29
8641	31.00	100	...	4	35
8632	32.00	200	...	3	56
8642	47.00	200	...	4	86

Type C Colt-Noark Nublade Switches

Quick-Make and Quick-Break—Single Throw
Solid Neutral



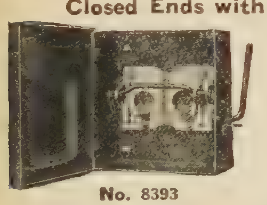
No. 8131

3-Pole—2 Blades—2 Poles Fusible

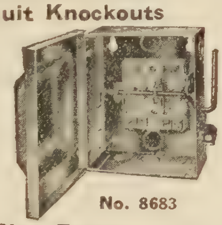
Cat. No.	Each	Amp.	Volts	Weight Pounds
8133	$4.50	30	125–250 or 230 A.C.	5½
8136	10.00	60	125–250 or 230 A.C.	13
8131	16.00	100	125–250 or 230 A.C.	19½
8132	25.00	200	125–250 or 230 A.C.	39
8134	70.00	400	125–250 or 230 A.C.	121
8137	110.00	600	125–250 or 230 A.C.	165
4-Pole—3 Blades—3 Poles Fusible				
8143	$9.00	30	230 A.C.	7
8146	13.00	60	230 A.C.	17
8141	23.00	100	230 A.C.	23½
8142	35.00	200	230 A.C.	52
8144	90.00	400	230 A.C.	158
8147	160.00	600	230 A.C.	203
5-Pole—4 Blades—4 Poles Fusible				
8153	$14.00	30	115–230 A.C.	9½
8156	22.00	60	115–230 A.C.	21
8151	40.00	100	115–230 A.C.	31
8152	56.00	200	115–230 A.C.	61½
8154	134.00	400	115–230 A.C.	175
8157	230.00	600	115–230 A.C.	255

Type D Colt-Noark Switches

Closed Ends with Conduit Knockouts



No. 8393



No. 8683

Single Throw—For Plug Fuses

Cat. No.	Each	Amps.	Volts	Poles	Fuses	Switch Blades	Neutral	Wt. Lbs.
513	$1.90	30	125	2	1	1	Solid	1¾
8283	1.90	30	125	2	1	1	Solid	4
8383	2.00	30	125–250	2	2	2	All Fused	4
8393	2.70	30	125–250	3	2	2	Solid	4½
8093	3.00	30	125–250	3	3	3	All Fused	5

Single Throw—For Cartridge Fuses

Cat. No.	Each	Amps.	Volts	Poles	Wt. Lbs.
8683	$2.50	30	230 A.C.	2	4½
8263	4.50	30	230 A.C.	3	6
8963	4.50	30	230 A.C.	3SWN	6
8273	7.00	30	230 A.C.	4	9
8226–2	8.00	60	230 A.C.	2	12
8236–2	9.50	60	230 A.C.	3	15½
8936–2	9.50	60	230 A.C.	3SWN	15½
8246–2	13.00	60	230 A.C.	4	20
8221–2	14.00	100	230 A.C.	2	19½
8231–2	16.00	100	230 A.C.	3	25
8931–2	16.00	100	230 A.C.	3SWN	25
8241–2	25.00	100	230 A.C.	4	28½
*8222–2	20.25	200	230 A.C.	2	37
*8232–2	24.70	200	230 A.C.	3	49
*8932–2	24.70	200	230 A.C.	3SWN	48
*8242–2	44.40	200	230 A.C	4	63
*8224–2	48.80	400	230 A.C.	2	88
*8234–2	70.00	400	230 A.C.	3	133
*8934–2	70.00	400	230 A.C.	3SWN	121
*8244–2	90.00	400	230 A.C.	4	170

* Quick-break.

Type D Colt-Noark Switches

Single Throw
Closed Ends with Conduit Knockouts
Non-Fusible

Cat. No.	Each	Amps.	Volts	Poles	Wt. Lbs.
8753	$2.50	30	230 A.C.	2	4½
8713	3.50	30	230 A.C.	3	5¾
8703	6.50	30	230 A.C.	4	9
8726–2	7.50	60	230 A.C.	2	12
8736–2	8.00	60	230 A.C.	3	15
8746–2	11.00	60	230 A.C.	4	18
8721–2	13.00	100	230 A.C.	2	17
8731–2	15.00	100	230 A.C.	3	22½
8741–2	21.00	100	230 A.C.	4	26
*8722–2	17.00	200	230 A.C.	2	35
*8732–2	23.20	200	230 A.C.	3	45
*8742–2	36.00	200	230 A.C.	4	55
*8724–2	37.50	400	230 A.C.	2	65
*8734–2	49.00	400	230 A.C.	3	100
*8744–2	65.50	400	230 A.C.	4	135

Solid Neutral

Cat. No.	Each	Amps.	Volts	Poles	Wt. Lbs.
3-Pole—2 Blades—2 Poles Fusible					
8163	$3.50	30	125–250 or 230 A.C.	3	4¾
8136–2	8.00	60	125–250 or 230 A.C.	3	12¼
8136–4	8.00	60	125–250 or 230 A.C.	3	12¼
8131–2	15.00	100	125–250 or 230 A.C.	3	19½
*8132–2	22.00	200	125–250 or 230 A.C.	3	39
*8134–2	68.00	400	125–250 or 230 A.C.	3	121
4-Pole—3 Blades—3 Poles Fusible					
8173	$6.75	30	230 A.C.	4	5¾
8146–2	11.00	60	230 A.C.	4	17
8141–2	21.00	100	230 A.C.	4	23½
*8142–2	33.30	200	230 A.C.	4	52
*8144–2	88.00	400	230 A.C.	4	158
5-Pole—4 Blades—4 Poles Fusible					
8153–2	$10.00	30	115–230 A.C.	5	9½
8156–2	17.00	60	115–230 A.C.	5	21
8151–2	33.00	100	115–230 A.C.	5	31
*8152–2	53.30	200	115–230 A.C.	5	61½
*8154–2	127.50	400	115–230 A.C.	5	175

*Quick-break.

Type D Colt-Noark Open End Switches

Sealable Fuse Covers
With Standardized Meter Terminal Chamber Knockouts in the Upper End

For Plug Fuses

Cat. No.	Each	Amps.	Volts	Poles	Fusing	Switch Blades	Neutral	Wt. Lbs.
8283-M	$1.90	30	125	2	1	1	Solid	4
8383-M	2.00	30	125–250	2	2	2	All Fused	4
8393-M	2.70	30	125–250	3	2	2	Solid	4
8093-M	3.00	30	125–250	3	3	3	All Fused	5
For Cartridge Fuses								
8683-M	$2.50	30	230	2	2	2	All Fused	4½
8263-M	4.50	30	230	3	3	3	All Fused	6
8163-M	3.50	30	125–250	3	2	2	Solid	5
8963-M	4.50	30	125–250	3	2	3	Solid Switching	6
8173-M	6.75	30	125–250	4	3	3	Solid	5¾
8273-M	7.00	30	230	4	4	4	All Fused	9
8153-M	10.00	30	125–250	5	4	4	Solid	9½
8226-M	8.00	60	250	2	2	2	All Fused	11¾
8236-M	9.50	60	230	3	3	3	All Fused	15¼
8936-M	9.50	60	125–250	3	2	3	Solid Switching	15¼
8136-M	8.00	60	125–250	3	2	2	Solid	12¼
8246-M	13.00	60	230	4	4	4	All Fused	20
8146-M	11.00	60	230	4	3	3	Solid	17
8156-M	17.00	60	125–250	5	4	4	Solid	21
8221-M	14.00	100	250	2	2	2	All Fused	19½
8231-M	16.00	100	230	3	3	3	All Fused	25
8931-M	16.00	100	125–250	3	2	3	Solid Switching	25
8131-M	15.00	100	125–250	3	2	2	Solid	19½
8241-M	25.00	100	230	4	4	4	All Fused	28½
8141-M	21.00	100	125–250	4	3	3	Solid	23½
8151-M	33.00	100	125–250	5	4	4	Solid	31

Colt-Noark "Acco" Meter Service Switches

Standardized—Accessible Service Side Fuse Type

Sequence: Switch-Fuse-Meter

The "Acco" Switch provides a complete meter service unit including main switch and cutout, with meter protective and testing facilities.

When the switch is at "off" position, the slide cover may be opened and fuses removed with assurance that the fuse contacts are dead; the switch cannot again be moved to "on" until the slide is closed.

For testing purposes separate switches are provided on the load side of the meter.

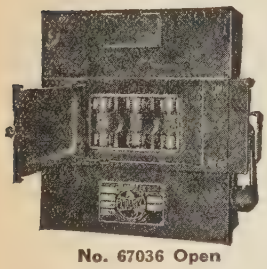
The "Acco" conforms to standard cabinet dimensions, using all standardized endwalls and accessories.

No. 66336

For Single-Phase and D.C. Service

Cat. No.	Switch with Endwall Each	Switch without Endwall Each	Amp.	Volts	Poles	Fusing	Switch Blades	Neutral	Test Blades	Std. Pkg.
9323	$6.50	$6.10	30	125–250	3	2 Plug	2	Solid	2	10
9333	6.90	6.50	30	125–250	3	2 Encl.	2	Solid	2	10
9343	5.30	4.90	30	125	2	1 Plug	1	Solid	1	10
9353	5.85	5.45	30	125	2	2 Plug	2	All Fused	2	10
9363	6.90	6.50	30	125 or 250	2	2 Encl.	2	All Fused	1	10
9373	5.70	5.30	30	125	2	1 Encl.	1	Solid	1	10
66376	13.00	12.10	60	125	2	1 N.E.C.	1	Solid	1 Set	4
66366	14.00	13.10	60	250	2	2 N.E.C.	2	None	1 Set	4
*66336	15.00	14.10	60	125–250	3	2 N.E.C.	2	Solid	2 Sets	4
66371	24.00	23.10	100	125	2	1 N.E.C.	1	Solid	1 Set	2
66361	24.00	23.10	100	250	2	2 N.E.C.	2	None	1 Set	2
*66331	26.00	25.10	100	125–250	3	2 N.E.C.	2	Solid	2 Sets	2

*Also 230 volts a. c.



No. 67036 Open

"Acco" Dualbreak Polyphase Meter Service Switch

Cat. No.	Switch with Endwall Each	Switch without Endwall Each	Amp.	Volts	Poles	Switching	Fusible	Kind of Fuse	Set of Test Links	Std. Pkg.
67033	$18.00	$17.45	30	230	3	3	3 Legs	Encl.	2	4
68143	23.00	22.45	30	230	4	3	3 Legs	Encl.	3	4
67036	23.50	22.60	60	230	3	3	3 Legs	Encl.	2	4
68146	27.00	26.10	60	230	4	3	3 Legs	Encl.	3	4
67031	45.00	44.10	100	230	3	3	3 Legs	Encl.	2	2
68141	54.00	53.10	100	230	4	3	3 Legs	Encl.	3	2

Colt-Noark "Seco" Meter Service Switches

Single Break Type—Standardized—Sealed Service Side Fuse Type

Sequence: Switch-Fuse-Meter

The "Seco" Switch is a complete meter service unit providing a main switch and cutout, service side fuses, full meter protection, and testing facilities, all sealed within the cabinet so that none but an authorized person may have access to them.

For testing purposes separate switches are provided on the load side of the meter.

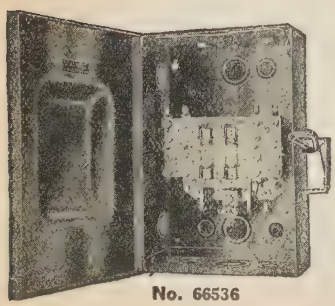
The Seco conforms to standard cabinet dimensions, using all standardized endwalls and accessories.

No. 9523

For Single-Phase and D.C. Service

Cat. No.	Switch with Endwall Each	Switch without Endwall Each	Amp.	Volts	Poles	Fusing	Switch Blades	Neutral	Test Blades	Std. Pkg.
9523	$5.10	$4.70	30	125–250	3	2 Plug	2	Solid	2	10
9533	5.85	5.45	30	125–250	3	2 Encl.	2	Solid	2	10
9543	4.10	3.70	30	125	2	1 Plug	1	Solid	1	10
9553	4.80	4.40	30	125	2	2 Plug	2	All Fused	1	10
9563	5.55	5.15	30	125 or 250	2	2 Encl.	2	All Fused	1	10
9573	5.20	4.80	30	125	2	1 Encl.	1	Solid	1	10
66576	10.50	9.60	60	125	2	1 N.E.C.	1	Solid	1 Set	4
66566	11.50	10.60	60	250	2	2 N.E.C.	2	None	1 Set	4
*66536	12.50	11.60	60	125–250	3	2 N.E.C.	2	Solid	2 Sets	4
66571	21.00	20.10	100	125	2	1 N.E.C.	1	Solid	1 Set	2
66561	21.00	20.10	100	250	2	2 N.E.C.	2	None	1 Set	2
*66531	23.00	22.10	100	125–250	3	2 N.E.C.	2	Solid	2 Sets	2

*Also 230 volts a.c.



No. 66536

"Seco" Dualbreak Polyphase Meter Service Switch—Sealed Fuses

Cat. No.	Switch with Endwall Each	Switch without Endwall Each	Amp.	Volts	Poles	Switching	Fusible	Kind of Fuse	Set of Test Links	Std. Pkg.
67533	$15.00	$14.45	30	230	3	3	3 Legs	Encl.	2	4
68643	21.50	20.95	30	230	4	3	3 Legs	Encl.	3	4
67536	20.00	19.10	60	230	3	3	3 Legs	Encl.	2	4
68646	25.00	24.10	60	230	4	3	3 Legs	Encl.	3	4
67531	35.00	34.10	100	230	3	3	3 Legs	Encl.	2	2
68641	44.00	43.10	100	230	4	3	3 Legs	Encl.	3	2

Colt-Noark Entrance Switches

Accessible Fuse Covers

Single Phase and D.C.—Solid Neutral

Cat. No.	Each	Amp.	Volts	Switch Blades	Fusible	Std. Pkg.	Wt. Lbs.
8323	$5.85	30		2	2 Legs	10	8¾
8333	6.60	30		2	2 Legs	10	9
8343	5.00	30		2	2 Legs	10	8¾
7636	10.75	60	115–230 A.C.	2	2 Legs	4	11
76331	19.50	100	125–250 D.C.	2	2 Legs	2	35
76232	55.00	200		2	2 Legs	1	65
76234	120.00	400		2	2 Legs	1	138
76237	190.00	600		2	2 Legs	1	205
76238	265.00	800		2	2 Legs	1	325
3-Phase—3-Wire							
77033	$14.50	30	230	3	3 Legs	4	11½
77036	20 00	60	230	3	3 Legs	4	20
77031	32.00	100	230	3	3 Legs	2	36
75232	60.00	200	230	3	3 Legs	1	82
75234	125.00	400	230	3	3 Legs	1	170
75237	200.00	600	230	3	3 Legs	1	280
75238	320.00	800	230	3	3 Legs	1	450
3-Phase—4-Wire—Solid Neutral							
77143	$18.00	30	230	3	3 Legs	4	11½
77146	21.00	60	230	3	3 Legs	4	20
77141	38.00	100	230	3	3 Legs	2	36
76242	77.00	200	230	3	3 Legs	1	82
76244	135.00	400	230	3	3 Legs	1	170
76247	205.00	600	230	3	3 Legs	1	280
76248	340.00	800	230	3	3 Legs	1	460
2-Phase—5-Wire—Solid Neutral							
76253	$26.00	30	115–230	4	4 Legs	4	11
76256	32.00	60	115–230	4	4 Legs	4	22
76251	50.00	100	115–230	4	4 Legs	2	41
76252	94.00	200	115–230	4	4 Legs	1	100
76254	175.00	400	115–230	4	4 Legs	1	205
76257	250.00	600	115–230	4	4 Legs	1	355

Colt-Noark Standardized Universal Meter Service Switches

Accessible Branch Plug Fuses

For Single-Phase and D.C. Service 30 Amperes

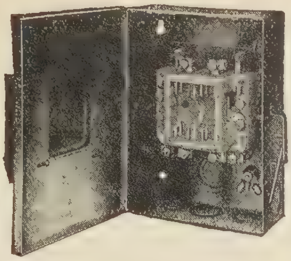
Switch-fuse-meter type; blades, fuses and all current-carrying parts are dead when switch is off. Service switch, service fuses and all service connections are sealed and accessible only to authorized persons. Branch circuits are accessible at all times.

Cat. No.	With Endwall Each	Without Endwall Each	Service Switch No. Poles	Service Switch No. Blades	Service Switch No. Fuses	Branch Circuits No. Circuits	Branch Circuits No. Fuses	Branch Circuits Fuses in Ea. Circuit	Std Pkg.
971123	$5.10	$4.70	2	1	1	2	2	1	10
*9723	6.75	6.35	2	1	1	4	4	1	10
972123	6.25	5.85	2	1	1	4	4	1	10
973333	5.50	5.10	2	1	1	1	2	2	10
			2	2	2	1	2	2	10
			3	2	2	1	2	2	10
			3	2	2	2	2	1	10
*9753	7.50	7.10	2	1	1	2	4	2	10
			2	2	2	2	4	2	10
			3	2	2	4	4	1	10
975333	7.00	6.60	2	1	1	2	4	2	10
			2	2	2	2	4	2	10
			3	2	2	4	4	1	10
*9793	7.50	7.10	3	2	2	2	4	2	10
979333	7.00	6.60	3	2	2	2	4	2	10

*Enclosed in long cabinets; equipped with testing links.

Colt-Noark New Sequence Meter Service Switches

Sequence: Switch-Meter-Fuse



No. 6636

Accessible Fuse Covers

The S.M.F. System is built upon two general types of devices: One with the switch blade on each side of the fuses, and the other with both switch blades at the left of the fuses. The former is particularly adapted to the use of links, and the latter to the use of flexible jumpers for testing.

Solid Neutral—125-250 Volts

Cat. Nos. Fuses Between Switch Blades	Cat. Nos. Switch Blades at Left of Fuses	With Endwall Each	Amp.	Poles	Main Fuses	Switch Blades	Range Fuses Cart	Lighting Fuses Plug	Std. Pkg.
*6623	....	$5.30	30	2	1	1	0	0	10
*6623 2	....	8.10	30	2	1	1	0	2	10
*6623-4	....	9.00	30	2	1	1	0	4	10
*6633	*6933	6.50	30	3	2	2	0	0	10
*6633-2	*6933-2	9.30	30	3	2	2	0	2	10
*6633 4	*6933-4	10.20	30	3	2	2	0	4	10
6636	6936	11.00	60	3	2	2	0	0	4
6636R	6936R	17.60	60	3	2	2	2	0	4
6636RL4	6936RL4	19.00	60	3	2	2	2	4	4
6636RL6	6936RL6	22.10	60	3	2	2	2	6	4
6636RL8	6936RL8	23.40	60	3	2	2	2	8	4
....	6931	20.00	100	3	2	2	0	0	2

*Plug fuses.

Colt-Noark Combination Entrance Switches

Sequence: Meter-Switch-Fuse

No. 7936RL4

No testing facilities.

For use with separate meter test box. Single door and dead front plate over main switch and branch circuit distribution blocks.

Conduit endwalls.

Solid Neutral
60 Amps., 125-250 V.

3-Pole

Cat. No.	Each	No. Fuses Main	No. Fuses Range	No. Fuses Lighting	Std. Pkg.
7936R	$13.50	2	2	0	4
7936L4	11.00	2	0	4	4
7936RL4	15.50	2	2	4	4
7936RL6	18.00	2	2	6	4
7936RL8	20.00	2	2	8	4

Colt-Noark Combination Fuse Cabinets

No. 5RL6

Surface Mounting

These cabinets may be coupled directly to the meter serice or entrance switch or mounted in some other convenient location in the building.

The 60-ampere cutout is equipped with a fuse puller.

All wiring within the cabinet is covered by a dead front plate.

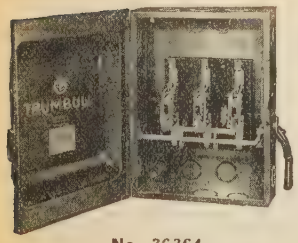
Cat. Nos. 2 and 4 are also supplied already wired for convenience in attaching to meter cabinet.

Cat. No.	Each	60-Amp. Cir.	30-Amp. Cir.	Ht. In.	Width In.	Depth In.	Std. Pkg.
5R	$7.15	1	0	9⅛	8⅜	3½	4
5RL4	10.90	1	4	11⅝	8⅜	3½	4
5RL6	12.75	1	6	14	8⅜	3½	4
5RL8	16.55	1	8	14	8⅜	3½	4
2	1.70	0	2	4⅝	6½	2⅝	10
2W	2.80	0	2	4⅝	6½	2⅝	10
4	2.34	0	4	7	6¾	2⅝	10
4W	3.70	0	4	7	6¾	2⅝	10

Type A Trumbull Safety Switches

Quick Make and Quick Break—Interlocking

2, 3 and 4-Pole, 30-2400 Amperes
230-575 Volts A.C., 250-600 Volts D.C.
800 Amperes and Above, Quick Break Only



No. 36364

Knockouts in ends, sides and rear. Above 400 amperes, no knockouts furnished.

Multiple terminal lugs furnished on switches 800 amperes and above.

All switches 400 amperes and above have ebony asbestos bases.

All switches listed below will break full rated load, except the 800 and 1200-ampere which break full load at 230 volts a.c.—250 volts d.c. and loads of not over 200 amperes at 575 volts a.c.—600 volts d.c.

Single Throw—No Fuse—Snuf-Arc Type

575 Volts A.C., 600 Volts D.C.—2-Pole

Cat. No.	Each	Amps.	H.P.	Ship. Wt. Lbs.	Cat. No.	Each	Amps.	Ship. Wt., Lbs.
*36221	$11.00	30	3	11	†36265	$90.00	400	78
36261	11.00	30	10	13	†36266	130.00	600	100
36262	15.00	60	15	13	30267	195.00	800	180
36263	23.00	100	25	23	30268	265.00	1200	270
36264	31.00	200	50	33	.....	.....	....	...
			575 Volts A.C.—3-Pole					
*36321	$13.00	30	5	12	36365	$100.00	400	100
36362	18.00	30–60	25	18	36366	160.00	600	123
36363	27.00	100	40	29	30367	260.00	800	240
36364	38.00	200	50	40	30368	350.00	1200	360
			575 Volts A.C.—4-Pole					
*36421	$18.00	30	5	16	36465	$130.00	400	112
36462	24.00	30–60	25	24	36466	195.00	600	190
36463	35.00	100	40	34	30467	335.00	800	300
36464	51.00	200	50	43	30468	460.00	1200	450

*230 volts a.c., 250 volts d.c. without snuf-arcs.
†Breaks full rated load at 575 volts a.c. only.

Single Throw—Fusible—Without Snuf-Arcs

230 Volts A.C., 250 Volts D.C.—2-Pole

72221	$12.00	30	2	12	72225	$90.00	400	95
72222	15.00	60	5	14	‡72226	130.00	600	121
72223	23.00	100	10	27	‡60227	220.00	800	211
72224	40.00	200	20	44	‡60228	305.00	1200	251
			230 Volts A.C.—3-Pole					
72321	$15.00	30	3	14	‡72326	$155.00	600	163
72322	20.00	60	5	20	‡60327	300.00	800	282
72323	30.00	100	10	36	‡60328	385.00	1200	332
72324	45.00	200	25	64	60329	790.00	1800	...
72325	100.00	400	...	135	60320	935.00	2400	...
			230 Volts A.C.—4-Pole					
72421	$18.00	30	3	17	‡72426	$205.00	600	203
72422	24.00	60	7½	29	‡60427	385.00	800	383
72423	40.00	100	15	47	‡60428	510.00	1200	453
72424	60.00	200	30	87	60429	1020.00	1800	...
72425	130.00	400	...	165	60420	1260.00	2400	...

‡With snuf-arcs.

Single Throw—Fusible—Snuf-Arc Type

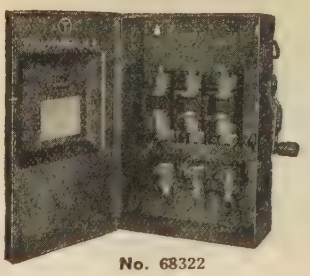
575 Volts A.C., 600 Volts D.C.—2-Pole

72261	$18.00	30	5	20	†72265	$110.00	400	111
72262	19.00	60	15	22	†72266	175.00	600	135
72263	30.00	100	25	35	60267	270.00	800	225
72264	47.00	200	50	58	60268	380.00	1200	265
			575 Volts A.C.—3-Pole					
72361	$22.00	30	7½	24	72365	$120.00	400	150
72362	23.00	60	15	25	72366	200.00	600	185
72363	35.00	100	30	41	60367	350.00	800	304
72364	58.00	200	50	70	60368	460.00	1200	491
			575 Volts A.C.—4-Pole					
72461	$27.00	30	10	29	72465	$155.00	400	174
72462	29.00	60	20	31	72466	240.00	600	236
72463	46.00	100	40	53	60467	450.00	800	416
72464	70.00	200	50	90	60468	575.00	1200	486

†Breaks full rated load at 575 volts a.c. only.

Type R.B. Trumbull Safety Switches

Quick Make and Quick Break—Interlocking



No. 68322

All switches will break full rated load except the 800-ampere which will break full load at 230 volts a.c., 250 volts d.c. and loads of not over 200 amperes at 575 volts a.c., 600 volts d.c.

All switch parts are cadmium-plated.

The 3-pole switches can be furnished at regular prices with solid neutral strap replacing one blade and fuse assembly, or with neutral strap replacing one fuse (switching neutral). Add the letters SWN to regular Cat. No.

Side Operated—Single Throw—No Fuse

575 Volts A.C., 600 Volts D.C.—2-Pole				575 Volts A.C.—3-Pole			
Cat. No.	Each	Amp.	H.P. Rating	Cat. No.	Each	Amp.	H.P. Rating
34261	$11.00	30	* 5	34361	$13.00	30	*10
34262	15.00	60	*10	34362	18.00	60	*25
34263	23.00	100	*20	34363	27.00	100	*40
34264	31.00	200	*25	34364	38.00	200	*50
34265	90.00	400	...	34365	100.00	400	.....
34266	130.00	600	...	34366	160.00	600	.....
34267	195.00	800	...	34367	260.00	800	.....

Side Operated—Single Throw—Fusible

230 Volts A.C., 250 Volts D.C.—2-Pole				575 Volts A.C., 600 Volts D.C.—2-Pole			
68221	$12.00	30	2	68261	$18.00	30	* 5
68222	15.00	60	5	68262	19.00	60	*10
68223	23.00	100	10	68263	30.00	100	*20
68224	40.00	200	20	68264	47.00	200	*25
68225	90.00	400	...	68265	110.00	400	.....
68226	130.00	600	...	68266	175.00	600	.....
68227	220.00	800	...	68267	270.00	800	.....
230 Volts A.C.—3-Pole				575 Volts A.C.—3-Pole			
68321	$15.00	30	3	68361	$22.00	30	* 7½
68322	20.00	60	5	68362	23.00	60	*15
68323	30.00	100	10	68363	35.00	100	*30
68324	45.00	200	25	68364	58.00	200	*50
68325	100.00	400	...	68365	120.00	400	.....
68326	155.00	600	...	68366	200.00	600	.....
68327	300.00	800	...	68367	350.00	800	.....

Front Operated—Single Throw—No Fuse

575 Volts A.C., 600 Volts D.C.—2-Pole				575 Volts A.C.—3-Pole			
32261	$11.00	30	* 5	32361	$13.00	30	*10
32262	15.00	60	*10	32362	18.00	60	*25
32263	23.00	100	*20	32363	27.00	100	*40
32264	31.00	200	*25	32364	38.00	200	*50
32265	90.00	400	...	32365	100.00	400	.....
32266	130.00	600	...	32366	160.00	600	.....
32267	195.00	800	...	32367	260.00	800	.....

Front Operated—Single Throw—Fusible

230 Volts A.C., 250 Volts D.C.—2-Pole				575 Volts A.C., 600 Volts D.C.—2-Pole			
64221	$12.00	30	2	64261	$18.00	30	* 5
64222	15.00	60	5	64262	19.00	60	*10
64223	23.00	100	10	64263	30.00	100	*20
64224	40.00	200	20	64264	47.00	200	*25
64225	90.00	400	...	64265	110.00	400	.....
64226	130.00	600	...	64266	175.00	600	.....
64227	220.00	800	...	64267	270.00	800	.....
230 Volts A.C.—3-Pole				575 Volts A.C.—3-Pole			
64321	$15.00	30	3	64361	$22.00	30	* 7½
64322	20.00	60	5	64362	23.00	60	*15
64323	30.00	100	10	64363	35.00	100	*30
64324	45.00	200	25	64364	58.00	200	*50
64325	100.00	400	...	64365	120.00	400	.....
64326	155.00	600	...	64366	200.00	600	.....
64327	300.00	800	...	64367	350.00	800	.....

*460–575 volts a.c. only.

Type RM Trumbull Safety Switches

Quick Make and Quick Break—Interlocking

Break Full Rated Load

RM (Rotor Movement) Design

No. 92321-C

A rugged, full safety device for installations where size is a prime factor. Entire switch and fuse block unit is removable from box. Thus, entire box space is available for connecting conduit and running wires.

When switch is pulled off, the blades throw into deep narrow slots in the base and thus effectually snuff out any arc which might have a tendency to follow.

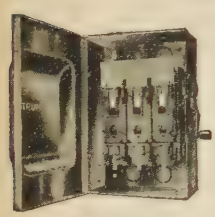
The fuse block mounted over the switch base, brings fuses directly to the front in most accessible position. Dead front construction.

Single Throw—No Fuse

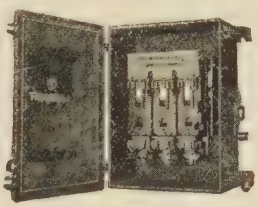
230 Volts A.C.—250 Volts D.C.

Amp.	H.P. Rating	Pole	Volts	Mounted in Steel Boxes Cat. No.	Each	Wt., Lbs. Carton of 10	In Weatherproof Cast Iron Boxes Cat. No.	Each	Wt. Lbs. Each
30	3	2	230 A.C. / 250 D.C.	46221	$11.00	56	46221C	$35.50	16
30	7½	3	230 A.C.	46321	13.00	69	46321C	36.50	17
30	7½	4	230 A.C.	46421	18.00	82	.....	.....	..
			575 Volts A.C.—600 Volts D.C.						
60	15	2	575 A.C. / 600 D.C.	46262	$15.00	*18	46262C	43.00	38
60	25	3	575 A.C.	46362	18.00	*20	46362C	45.00	30
60	25	4	575 A.C.	46462	24.00	*22	.....	.....	..

Single Throw—Fusible



No. 92362



No. 92362-C

230 Volts A.C.—250 Volts D.C.

30	2	2	230 A.C. / 250 D.C.	92221	$12.00	64	92221C	$36.00	17
30	3	3	230 A.C.	92321	15.00	72	92321C	37.50	18
30	3	4	230 A.C.	92421	18.00	94	92421C	40.50	..
60	5	2	230 A.C. / 250 D.C.	92222	15.00	*15	92222C	43.50	38
60	5	3	230 A.C.	92322	20.00	*18	92322C	45.50	40
60	7½	4	230 A.C.	92422	24.00	*22	.....	.....	..
			575 Volts A.C.—600 Volts D.C.						
30	5	2	575 A.C. / 600 D.C.	92261	$18.00	*13	92261C	$45.00	36
30	7½	3	575 A.C.	92361	22.00	*14	92361C	47.50	37
30	10	4	575 A.C.	†92461	27.00	*23	.....	.....	..
60	15	2	575 A.C. / 600 D.C.	92262	19.00	*16	92262C	45.00	39
60	15	3	575 A.C.	92362	23.00	*19	92362C	47.50	41
60	25	4	575 A.C.	92462	29.00	*23	.....	.....	..

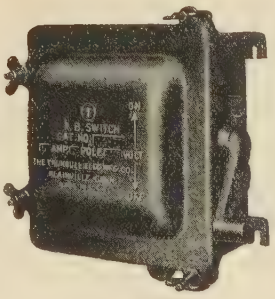
*Weight of carton of 1.

†60-ampere construction.

Three and four-pole fusible switches with solid neutral strap replacing fuse can be furnished at regular prices.

Trumbull Safety Switches

In Cast Iron Weatherproof Boxes
Quick Make and Quick Break—Interlocking



No. 34361C

Equipped with gaskets in cover making a weatherproof box.

All switches break full rated load.

The 3 and 4-pole switches with a neutral strap replacing either one blade and fuse assembly or one blade only can be furnished at same price as the regular switches.

Special charge for drilling holes in cast iron boxes.

Type A Switches
Single Throw—Fusible

Without Snuf-Arcs

230 Volts A.C., 250 Volts D.C.—2-Pole

Cat. No.	Each	Amp.	H.P. Rating
72223C	$135.00	100	10
72224C	155.00	200	20
	230 Volts A.C.—3-Pole		
72323C	$145.00	100	10
72324C	172.00	200	25
	230 Volts A.C.—4-Pole		
72423C	$159.00	100	15

With Snuf-Arcs

575 Volts A.C., 600 Volts D.C.—2-Pole

72263C	$154.00	100	25
72264C	179.00	200	50
	575 Volts A.C.—3-Pole		
72363C	$158.50	100	30
72364C	191.00	200	50
	575 Volts A.C.—4-Pole		
72463C	$162.50	100	40

Type R.B. Switches
Side Operated—Single Throw—No Fuse

230-575 Volts A.C., 250-600 Volts D.C.—2-Pole

Cat. No.	Each	Amp.	H.P. Ratings 230 A.C.	250 D.C.	575 A.C.
34261C	$35.50	30	5	3	5
34262C	43.00	60	10	5	10
34263C	150.00	100	15	10	20
	230-575 Volts A.C.—3-Pole				
34361C	$36.50	30	10	..	10
34362C	45.00	60	20	..	25
34363C	154.00	100	30	..	40

Side Operated—Single Throw—Fusible

230 Volts A.C., 250 Volts D.C.—2-Pole

68221C	$36.00	30	2	2	..
68222C	43.50	60	5	5	..
68223C	135.00	100	7½	10	..
68224C	155.00	200	10	20	..
	575 Volts A.C., 600 Volts D.C.—2-Pole				
68261C	$45.00	30	..	..	5
68262C	45.00	60	..	..	10
68263C	154.00	100	..	..	20
	230 Volts A.C.—3-Pole				
68321C	$37.50	30	3	..	..
68322C	45.50	60	5	..	..
68323C	145.00	100	10	..	..
68324C	172.00	200	25	..	..
	575 Volts A.C.—3-Pole				
68361C	$47.50	30	..	..	7½
68362C	47.50	60	..	..	15
68363C	158.50	100	..	..	30

Type C Trumbull Enclosed Switches

Single Throw—Quick Make and Quick Break

Break Full Rated Load

No. 40321, Fusible

This line meets requirements for a high-class punched-clip switch in externally-operated box.

Type C line has no interlocking features.

Switch is of punched-clip construction; there is a difference between punched-clip switches in machine work, alignment, adjustment and in electrical and mechanical strength.

Key slots in rear of box at top with which to hang box in position until ready to fasten permanently.

All switches equipped with outside grounding lug.

Knockouts in ends, sides and rear.

The 30-ampere 575-volt switches are made of 60-ampere stock.

No Fuse—Without Snuf-Arcs

230 Volts A.C., 250 Volts D.C.—2-Pole					230 Volts A.C.—3-Pole				
Cat. No.	Each	Amp.	H.P. Rating	Wt. Lbs.	Cat. No.	Each	Amp.	H.P. Rating	Wt. Lbs.
20221	$ 5.50	30	2	6	20321	$ 7.00	30	3	9
20222	9.00	60	5	11	20322	10.00	60	5	13
20223	16.00	100	10	16	20323	17.00	100	10	18
20224	21.00	200	20	22	20324	25.00	200	25	34
*20225	45.00	400	..	..	*20325	57.00	400	..	..
*20226	76.00	600	..	..	*20326	90.00	600	..	..

No Fuse—With Snuf-Arcs

575 Volts A.C.—3-Pole					575 Volts A.C.—4-Pole				
20361	$9.00	30	15	12	20461	$12.00	30	15	20
20362	12.00	30–60	15	13	20462	20.00	30–60	15	21
20363	22.00	100	30	18	20463	31.00	100	40	34
20364	32.00	200	50	34	20464	47.00	200	50	50

Fusible—Without Snuf-Arcs

230 Volts A.C., 250 Volts D.C.—2-Pole					230 Volts A.C.—3-Pole				
†13221	$ 4.00	30	..	6	†13321	$ 6.00	30	..	8
40221	6.00	30	2	8	40321	7.50	30	3	9
40222	10.00	60	3	12	40322	11.00	60	5	17
40223	16.00	100	7½	23	40323	20.00	100	10	30
40224	22.00	200	15	36	40324	29.00	200	25	50
*40225	64.00	400	..	92	*40325	74.00	400	..	125
*40226	99.00	600	..	..	*40326	115.00	600	..	...

230 Volts A.C., 3-Pole, 3 Blades, 2 Fuses					230 Volts A.C.—4-Pole				
42321	$ 7.50	30	3	9	40421	$13.00	30	3	14
42322	11.00	60	5	17	40422	15.00	60	7½	25
42323	20.00	100	10	30	40423	30.00	100	15	66
*42324	29.00	200	25	50	*40424	48.00	200	30	92
*42325	74.00	400	..	125	*40425	105.00	400	..	165
*42326	115.00	600	..	...	*40426	165.00	600	..	...

Fusible—With Snuf-Arcs

575 Volts A.C.—3-Pole					575 Volts A.C.—4-Pole				
40361	$12.00	30	7½	19	40461	$20.00	30	10	29
40362	15.00	60	15	20	40462	22.00	60	15	30
40363	28.00	100	30	35	40463	40.00	100	40	66
40364	42.00	200	50	75	40464	57.00	200	50	96

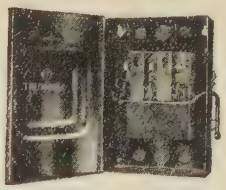
Solid Neutral

115-230 Volts A.C., 125-250 Volts D.C., 3-Pole, 2 Blades, 2 Fuses					115-230 Volts A.C. 4-Pole, 3 Blades, 3 Fuses				
41321	$ 7.00	30	2	8	41421	$ 9.00	30	3	10
41322	10.00	60	3	12	41422	13.00	60	5	18
41323	16.00	100	7½	23	41423	23.00	100	10	31
*41324	25.00	200	15	36	41424	35.00	200	25	51
*41325	70.00	400	..	95	*41425	90.00	400	..	130
*41326	110.00	600	..	120	*41426	160.00	600	..	165

*Copper parts of Type A construction.
†Porcelain base, interlocking cover.

Type D Trumbull Enclosed Switches

Single Throw



No. 12321

No. 24111

No Fuse—250 Volts, 230 Volts A.C.

Cat. No.	Each	Amp.	Volts	Pole	Blades	Wt., Lbs. Each
12221	$2.50	30	250	2	2	5
12321	3.50	30	230 A.C.	3	3	8
12421	6.50	30	230 A.C.	4	4	10
12222	7.50	60	250	2	2	9
12322	8.00	60	230 A.C.	3	3	12
12422	11.00	60	230 A.C.	4	4	15½
12223	13.00	100	250	2	2	14
12323	15.00	100	230 A.C.	3	3	17
12423	21.00	100	230 A.C.	4	4	20
12224	17.00	200	250	2	2	22
12324	23.20	200	230 A.C.	3	3	34
12424	36.00	200	230 A.C.	4	4	50
12225	37.50	400	250	2	2	....
12325	49.00	400	230 A.C.	3	3	....
12425	65.50	400	230 A.C.	4	4	....

For Plug Fuses—Porcelain Base—125-250 Volts

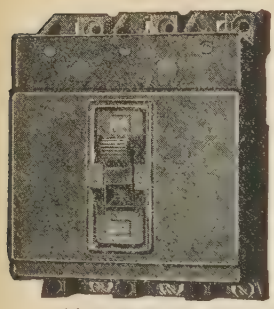
Cat. Nos. Closed Ends	Cat. Nos. Ends with Twistouts	Each	Amp.	Volts	Pole	Blades	Fuses	Wt. Lbs.
†24111	.....	$1.90	30	125	2SN	1	1	30
‡24111K	.....	1.90	30	125	2SN	1	1	30
24211	27211	2.00	30	125	2	2	2	47
*023111	025111	1.90	30	125	2SN	1	1	45
23111	25111	1.90	30	125	2SN	1	1	47
24311	27311	3.00	30	125–250	3	3	3	70
23311	25311	2.70	30	125–250	3SN	2	2	70
*023311	025311	2.70	30	125–250	3SN	2	2	50
24311SWN	27311SWN	3.00	30	125–250	3SNW	3	2	70

*Removable end plates with knockouts, top and bottom.
†Base mounted on saddle, entire unit easily removed.
‡Two separate and insulated neutral straps each having two terminal screws provide terminals for oil burner thermostat and neutral wires.

For Cartridge Fuses—Maximum 250 Volts

Cat. Nos. Closed Ends	Cat. Nos. Ends with Twistouts	Each	Amp.	Volts	Pole	Blades	Fuses	Wt. Lbs.
24221	27221	$2.50	30	250	2	2	2	5
24321	27321	4.50	30	230 A.C.	3	3	3	8
23321	25321	3.50	30	125–250	3SN	2	2	6
24321SWN	27321SWN	4.50	30	230 A.C.	3SWN	3	2	8
24421	27421	7.00	30	230 A.C.	4	4	4	9
23421	25421	6.75	30	230 A.C.	4SN	3	3	9
24222	27222	8.00	60	250	2	2	2	12
24322	27322	9.50	60	230 A.C.	3	3	3	14½
23322	25322	8.00	60	115–230 A.C.	3SN	2	2	13
24322SWN	27322SWN	9.50	60	230 A.C.	3SWN	3	2	15
24422	27422	13.00	60	230 A.C.	4	4	4	17½
23422	25422	11.00	60	230 A.C.	4SN	3	3	17
24223	27223	14.00	100	250	2	2	2	20½
24323	27323	16.00	100	230 A.C.	3	3	3	23
23323	25323	15.00	100	115–230 A.C.	3SN	2	2	21
24323SWN	27323SWN	16.00	100	230 A.C.	3SWN	3	2	25
24423	27423	25.00	100	230 A.C.	4	4	4	28
23423	25423	21.00	100	230 A.C.	4SN	3	3	27
24224	.....	20.25	200	250	2	2	2	36
24324	27324	24.70	200	230 A.C.	3	3	3	50
23324	25324	22.00	200	115–230 A.C.	3SN	2	2	34
24324SWN	27324SWN	24.70	200	230 A.C.	3SWN	3	2	45
24424	.....	44.40	200	230 A.C.	4	4	4	92
23424	.....	33.30	200	230 A.C.	4SN	3	3	48
24225	.....	48.80	400	250	2	2	2	92
24325	27325	70.00	400	230 A.C.	3	3	3	125
23325	25325	68.00	400	115–230 A.C.	3SN	2	2	90
24325SWN	27325SWN	70.00	400	230 A.C.	3SWN	3	2	120
24425	.....	90.00	400	230 A.C.	4	4	4	165
23425	.....	88.00	400	230 A.C.	4SN	3	3	125

No. AF-1 Trumbull Circuit Breakers



15 to 50-Ampere Frame Size
250 Volts, 3-Pole

An unusual principle of arc interruption is incorporated in the design of these breakers. On overloads of short circuits a thermal strip deflects, releasing a latch which in turn causes the contacts to open. The contacts themselves open within a heavy cylinder, creating a terrific pressure which extinguishes the arc.

The 50-ampere frame size has an interrupting capacity of 5000 amperes and the larger frame sizes an interrupting capacity of 10,000 amperes.

With one design of breaker as listed for the various frame sizes, assemblies may be made for enclosed breakers, load centers, panelboards of all types including the convertible, as well as switchboards of front or back connected construction.

125 Volts A.C., 125 Volts D.C.

50-Ampere Frame

	Circuit Breaker Only		With Screw Cover Top *Flush Mounting			
	Single Pole		Single Pole		2 Single Pole	
Amp.	Cat. No.	Each	Cat. No.	Each	Cat. No.	Each
15	AF11015	$4.75	AF11015F	$6.75	AF111015F	$11.80
20	AF11020	4.75	AF11020F	6.75	AF111020F	11.80
25	AF11025	4.75	AF11025F	6.75	AF111025F	11.80
35	AF11035	5.40	AF11035F	7.40	AF111035F	13.10
50	AF11050	5.40	AF11050F	7.40	AF111050F	13.10

*For surface mounting add S to Cat. No. instead of F.

230 Volts A.C., 125–250 Volts D.C.

50-Ampere Frame

	2 Pole			3-Pole		
Amp.	Cat. No.	Circuit Breaker Only Each	*With Hinged Cover Box Each	Cat. No.	Circuit Breaker Only Each	*With Hinged Cover Box Each
15	†AF21015	$10.00	$18.00	AF25015	$29.00	$34.00
20	†AF21020	10.00	18.00	AF25020	29.00	34.00
25	†AF21025	10.00	18.00	AF25025	29.00	34.00
35	†AF21035	10.75	20.00	AF25035	30.00	35.00
50	†AF21050	10.75	20.00	AF25050	30.00	35.00
			100-Ampere Frame			
50	AF22050	$32.00	$38.00	AF26050	$51.00	$57.00
70	AF22070	33.00	39.00	AF26070	52.00	58.00
90	AF22090	35.00	41.00	AF26090	54.00	60.00
100	AF22100	36.00	42.00	AF26100	55.00	61.00
			225-Ampere Frame			
50	AF23050	$81.00	$89.00	AF27050	95.00	103.00
70	AF23070	81.00	89.00	AF27070	95.00	103.00
90	AF23090	81.00	89.00	AF27090	95.00	103.00
100	AF23100	81.00	89.00	AF27100	95.00	103.00
125	AF23125	83.00	91.00	AF27125	97.00	105.00
150	AF23150	85.00	93.00	AF27150	98.00	107.00
175	AF23175	86.00	94.00	AF27175	101.00	109.00
200	AF23200	88.00	96.00	AF27200	102.00	110.00
225	AF23225	90.00	98.00	AF27250	104.00	112.00
			600-Ampere Frame			
225	AF24225	$221.00	$241.00	AF28225	$237.00	$257.00
250	AF24250	231.00	251.00	AF28250	247.00	267.00
325	AF24325	240.00	260.00	AF28325	257.00	277.00
400	AF24400	250.00	270.00	AF28400	266.00	286.00
450	AF24450	259.00	279.00	AF28450	276.00	296.00
500	AF24500	269.00	289.00	AF28500	285.00	305.00
550	AF24550	278.00	298.00	AF28550	295.00	315.00
600	AF24600	288.00	308.00	AF28600	304.00	324.00

*Add letter H to Cat. No. for hinged cover box. Enclosing cases are of bakelite. A handle guard is provided, into which may be inserted a padlock for locking the breaker in either the off or on position.

†For screw cover box add letter F to Cat. No. for flush mounting or letter S for surface mounting and add $2.30 to list price of circuit breaker only. This enclosing case is furnished only for the 2-pole 50-ampere frame sizes.

No. AF-1 Trumbull Circuit Breakers

Illustration shows the enclosed AF-1 breaker in a neat, rounded corner, steel box.

Starting with the 100-ampere frame size, interchangeable trip units are available and all breakers off inverse time limit protection. In breakers 100-ampere frame size and above, dual overload is provided as a standard feature.

The 50-ampere frame size breakers do not have interchangeable trip units.

600 Volts A.C., 250 Volts D.C.

50-Ampere Frame

	2 Pole			3 Pole		
Amp.	Cat. No.	Circuit Breaker Only Each	*With Hinged Cover Box Each	Cat. No.	Circuit Breaker Only Each	*With Hinged Cover Box Each
15	AF31015	$16.00	$23.00	AF35015	$38.00	$43.00
20	AF31020	16.00	23.00	AF35020	38.00	43.00
25	AF31025	16.00	23.00	AF35025	38.00	43.00
35	AF31035	17.00	25.00	AF35035	40.00	45.00
50	AF31050	17.00	25.00	AF35050	40.00	45.00
			100-Ampere Frame			
50	AF32050	$42.00	$48.00	AF36050	$69.00	$75.00
70	AF32070	44.00	50.00	AF36070	70.00	76.00
90	AF32090	46.00	52.00	AF36090	72.00	78.00
100	AF32100	48.00	54.00	AF36100	74.00	80.00
			225-Ampere Frame			
50	AF33050	$101.00	$109.00	AF37050	$123.00	$131.00
70	AF33070	101.00	109.00	AF37070	123.00	131.00
90	AF33090	101.00	109.00	AF37090	123.00	131.00
100	AF33100	101.00	109.00	AF37100	123.00	131.00
125	AF33125	104.00	112.00	AF37125	125.00	133.00
150	AF33150	106.00	114.00	AF37150	127.00	135.00
175	AF33175	108.00	116.00	AF37175	130.00	138.00
200	AF33200	111.00	119.00	AF37200	132.00	140.00
225	AF33225	113.00	121.00	AF37225	135.00	143.00
			600-Ampere Frame			
225	AF34225	$262.00	$282.00	AF38225	$286.00	$306.00
250	AF34250	274.00	294.00	AF38250	298.00	318.00
325	AF34325	286.00	306.00	AF38325	309.00	329.00
400	AF34400	298.00	318.00	AF38400	321.00	341.00
450	AF34450	310.00	330.00	AF38450	333.00	353.00
500	AF34500	321.00	341.00	AF38500	345.00	365.00
550	AF34550	333.00	353.00	AF38550	357.00	377.00
600	AF34600	345.00	365.00	AF38600	369.00	389.00

*Add letter H to Cat. No. for hinged cover box.

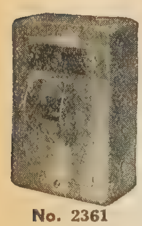
Interchangeable Trip Units

100-Ampere Frame—All Voltages

	2 Pole		3 Pole	
Amp.	Cat. No.	Each	Cat. No.	Each
50	AF226050T	$8.00	AF326050T	$11.00
70	AF226070T	9.00	AF326070T	13.00
90	AF226090T	11.00	AF326090T	15.00
100	AF226100T	12.00	AF326100T	17.00
		225-Ampere Frame—All Voltages		
50	AF237050T	$24.00	AF337050T	$30.00
70	AF237070T	25.00	AF337070T	31.00
90	AF237090T	26.00	AF337090T	32.00
100	AF237100T	27.00	AF337100T	33.00
125	AF237125T	29.00	AF337125T	35.00
150	AF237150T	30.00	AF337150T	36.00
175	AF237175T	31.00	AF337175T	37.00
200	AF237200T	32.00	AF337200T	38.00
225	AF237225T	33.00	AF337225T	39.00
		600-Ampere Frame—All Voltages		
225	AF248225T	$48.00	AF348225T	$62.00
250	AF248250T	55.00	AF348250T	69.00
275	AF248275T	62.00	AF348275T	76.00
300	AF248300T	69.00	AF348300T	84.00
325	AF248325T	76.00	AF348325T	90.00
350	AF248350T	84.00	AF348350T	97.00
400	AF248400T	90.00	AF348400T	104.00
450	AF248450T	97.00	AF248450T	111.00
500	AF248500T	104.00	AF348500T	118.00
525	AF248525T	111.00	AF348525T	125.00
550	AF248550T	118.00	AF348550T	132.00
600	AF248600T	125.00	AF348600T	139.00

Type R.B. Trumbull Tumbler Switches

Without Overload Protection



No. 2361

Particularly adapted for use on small motor-driven machines; with automatic apparatus such as oil burners, ice machines, either for control or as a positive disconnect. Also used on lighting circuits.

On the 2-pole, 3-way and 4-pole switches, the R.B. type roller contact provides greater rupturing capacity and longer life.

The 3-pole switch is mounted on moulded composition base which can easily be removed for wiring. Cover is held by two screws.

2-Pole

30 Amp., 250 Volts; 5 Amp., 600 Volts; 2 H.P., 250-600 Volts

Cat. No.	Each	Type Mounting	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
2228	$2.40	Surface	10	50	88
3228	2.10	Flush	10	50	50
2228F	4.20	Float	10	50	100
2228S	1.65	Switch Unit	10	50	38
3-Way					
10 Amp., 125 Volts; 5 Amp., 250 Volts					
2328	$2.40	Surface	10	50	88
3328	2.10	Flush	10	50	50
2328F	4.20	Float	10	50	100
2328S	1.65	Switch Unit	10	50	38
3-Pole					
30 Amp., 250 Volts; 5 Amp., 600 Volts; 2 H.P., 250-600 Volts A.C.					
2361	$6.00	Surface	1	10	30
3361	7.00	Flush	1	10	40
2361F	8.00	Float	1	10	35
2361S	4.25	Switch Unit	1	10	15
4-Pole					
30 Amp., 250 Volts; 5 Amp., 600 Volts					
2428	$9.00	Surface	10	10	40

Type T.T. Trumbull Tumbler Switches

With Thermostatic Overload Protection

For Controlling Single Phase Motors
Maximum Rating ½ H.P. 220 Volts A.C. and ¼ H.P. 110 Volts A.C.

Cat. No.	Each	Amp.	Mounting	Carton	Wt., Lbs. Carton
2220 3/10	$4.84	3/10	Surface	10	18
6220 3/10	3.93	3/10	Flush	10	10
2220 3/10S	3.63	3/10	Switch Unit	10	8
2220½	4.84	½	Surface	10	18
6220½	3.93	½	Flush	10	10
2220½S	3.63	½	Switch Unit	10	8
2220¾	4.84	¾	Surface	10	18
6220¾	3.93	¾	Flush	10	10
2220¾S	3.63	¾	Switch Unit	10	8
2229	4.84	1	Surface	10	18
6229	3.93	1	Flush	10	10
2229S	3.63	1	Switch Unit	10	8
2229½	4.84	1½	Surface	10	18
6229½	3.93	1½	Flush	10	10
2229½S	3.63	1½	Switch Unit	10	8
2222	4.84	2	Surface	10	18
6222	3.93	2	Flush	10	10
2222S	3.63	2	Switch Unit	10	8
2222½	4.84	2½	Surface	10	18
6222½	3.93	2½	Flush	10	10
2222½S	3.63	2½	Switch Unit	10	8
2223	4.84	3	Surface	10	18
6223	3.93	3	Flush	10	10
2223S	3.63	3	Switch Unit	10	8
2223½	4.84	3½	Surface	10	18
6223½	3.63	3½	Flush	10	10
2223½S	3.63	3½	Switch Unit	10	8
2224	4.84	4	Surface	10	18
6224	3.93	4	Flush	10	10
2224S	3.63	4	Switch Unit	10	8
2224½	4.84	4½	Surface	10	18
6224½	3.93	4½	Flush	10	10
2224½S	3.63	4½	Switch Unit	10	8
2225	4.84	5	Surface	10	18
6225	3.93	5	Flush	10	10
2225S	3.63	5	Switch Unit	10	8
2226	4.84	6	Surface	10	18
6226	3.93	6	Flush	10	10
2226S	3.63	6	Switch Unit	10	8

FA Type A Knife Switches

High Grade Milled-In Clip Without Fuse Connections

Front Connection—Satin Finish On Dead Black Finish Slate Bases

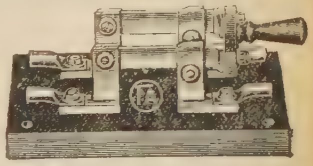
SINGLE-POLE

250 Volts D.C. or 500 Volts A.C.

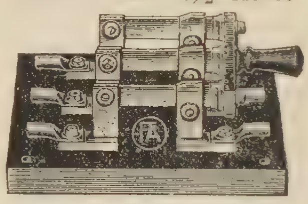
Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*A 3310	30	2½	$3.30	*A 3310T	30	3	$4.50
A 3510	30	3	3.90	A 3510T	30	4	5.50
A 6310	60	3	4.30	A 6310T	60	5	6.10
A 10310	100	4½	5.50	A 10310T	100	7	7.60
A 20310	200	8	8.00	A 20310T	200	10	11.70
A 40310	400	15½	15.20	A 40310T	400	20	23.50
A 60310	600	23	22.50	A 60310T	600	30	37.20
A 80310	800	37	46.20	A 80310T	800	47½	67.40
A100310	1000	40½	53.90	A100310T	1000	52	81.80
A120310	1200	45	81.80	A120310T	1200	54½	97.10

DOUBLE POLE

250 Volts D.C. or 500 Volts A.C.



Single-Throw				Double-Throw			
*A 3320	30	3¾	$6.00	*A 3320T	30	5	$8.30
A 3520	30	4	7.00	A 3520T	30	7	10.50
A 6320	60	5	7.80	A 6320T	60	8	11.60
A 10320	100	8¾	9.70	A 10320T	100	11½	14.60
A 20320	200	16	14.90	A 20320T	200	17	22.30
A 40320	400	29	28.20	A 40320T	400	33½	44.90
A 60320	600	37	43.10	A 60320T	600	50	71.50
A 80320	800	63	89.60	A 80320T	800	79	131.00
A100320	1000	69	105.80	A100320T	1000	87	157.20
A120320	1200	76½	129.00	A120320T	1200	91	193.80



3-POLE

250 Volts D.C. or 500 Volts A.C.

Single-Throw				Double-Throw			
*A 3330	30	4½	$8.40	*A 3330T	30	7½	$12.00
A 3530	30	7½	10.10	A 3530T	30	12	15.40
A 6330	60	7½	11.10	A 6330T	60	12	17.10
A 10330	100	12½	14.20	A 10330T	100	18	21.40
A 20330	200	22½	21.60	A 20330T	200	25	33.50
A 40330	400	43½	42.20	A 40330T	400	50	66.70
A 60330	600	51	63.50	A 60330T	600	75	106.00
A 80330	800	84	133.20	A 80330T	800	118	191.90
A100330	1000	94	157.10	A100330T	1000	130	235.00
A120330	1200	109	192.30	A120330T	1200	136	288.30

4-POLE

250 Volts D.C. or 500 Volts A.C.

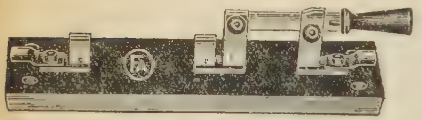
Single-Throw				Double-Throw			
*A 3340	30	6	$11.00	*A 3340T	30	10	$15.80
A 3540	30	13	13.60	A 3540T	30	16	20.60
A 6340	60	13	15.10	A 6340T	60	16	22.80
A 10340	100	20¼	18.60	A 10340T	100	23	28.70
A 20340	200	33	29.70	A 20340T	200	34	44.60
A 40340	400	56	57.00	A 40340T	400	67	89.40
A 60340	600	78	85.50	A 60340T	600	100	143.50
A 80340	800	124	176.90	A 80340T	800	158	261.10
A100340	1000	137	208.20	A100340T	1000	174	312.50
A120340	1200	157	256.20	A120340T	1200	182	383.80

*For 250 volts, d.c. only.

FA Type A Knife Switches

High Grade Milled-In Clip
With Cartridge Fuse Connections at Hinge End

Front Connection—Satin Finish
On Dead Black Finish Bases



SINGLE-POLE

250 Volts D.C. or A.C.

Single-Throw

Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
A 3311	30	3	$3.80
A 6311	60	6	5.20
A 10311	100	8½	7.60
A 20311	200	18	11.00
A 40311	400	25	19.90
A 60311	600	34½	30.60
A 80311	800	56	65.40
A100311	1000	62½	83.80
A120311	1200	70	98.60

Double-Throw

Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
A 3311T	30	5¼	$5.60
A 6311T	60	8	8.30
A 10311T	100	13½	12.80
A 20311T	200	22½	19.40
A 40311T	400	43	33.00
A 60311T	600	59	54.20
A 80311T	800	66	107.40
A100311T	1000	70	136.90
A120311T	1200	73	159.40

DOUBLE-POLE

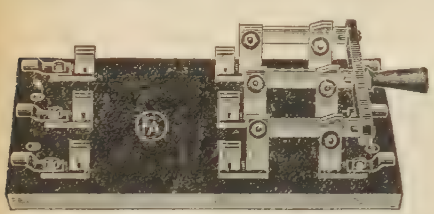
250 Volts D.C. or A.C.

Single-Throw

A 3322	30	5	$7.00
A 6322	60	8¼	9.40
A 10322	100	14	14.10
A 20322	200	26	20.80
A 40322	400	44½	38.90
A 60322	600	67	58.60
A 80322	800	99	128.90
A100322	1000	110	164.00
A120322	1200	122	193.70

Double-Throw

A 3322T	30	8¾	$11.10
A 6322T	60	13½	16.60
A 10322T	100	22½	24.90
A 20322T	200	34	36.60
A 40322T	400	72	63.00
A 60322T	600	99	106.40
A 80322T	800	110	209.40
A100322T	1000	117	266.30
A120322T	1200	122	311.80



3-POLE

250 Volts D.C. or A.C.

Single-Throw

A 3333	30	7½	$9.80
A 6333	60	12¾	13.90
A 10333	100	20	20.60
A 20333	200	35	30.40
A 40333	400	69½	57.10
A 60333	600	87	86.20
A 80333	800	145	192.70
A100333	1000	160	243.00
A120333	1200	177	287.80

Double-Throw

A 3333T	30	13	$16.60
A 6333T	60	20	25.10
A 10333T	100	33	36.90
A 20333T	200	51	53.80
A 40333T	400	108	94.40
A 60333T	600	148	156.80
A 80333T	800	165	311.60
A100333T	1000	175	395.40
A120333T	1200	183	471.00

4-POLE

250 Volts D.C. or A.C.

Single-Throw

A 3344	30	10	$13.00
A 6344	60	18	18.60
A 10344	100	34	28.00
A 20344	200	60	41.70
A 40344	400	109	77.90
A 60344	600	144	117.40
A 80344	800	212	256.00
A100344	1000	235	323.70
A123044	1200	265	383.00

Double-Throw

A 3344T	30	17½	$21.80
A 6344T	60	27	33.60
A 10344T	100	45	48.40
A 20344T	200	68	72.90
A 40344T	400	144	125.40
A 60344T	600	198	206.40
A 80344T	800	220	413.60
A100344T	1000	234	531.20
A120344T	1200	244	625.60

NOTE.—Double-throw switches will be furnished with fuse connections at both ends.

FA Type F Knife Switches

Formed Clip
Single-Pole—Unfusible

Front Connection—Plain Finish

250 Volts D.C. or 500 Volts A.C.

Single-Throw

Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*F 3310	30	1½	$1.80
F 3510	30	2½	2.40
F 6310	60	2½	2.60
F10310	100	4	3.40
F20310	200	7	5.40

Double-Throw

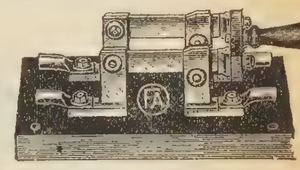
Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*F 3310T	30	3	$2.20
F 3510T	30	4½	3.10
F 6310T	60	4½	3.40
F10310T	100	6¼	4.40
F20310T	200	12½	7.80

FA Type F Knife Switches

Formed Clip
Double-Pole—Unfusible

Front Connection—Plain Finish

250 Volts D.C. or 500 Volts A.C.



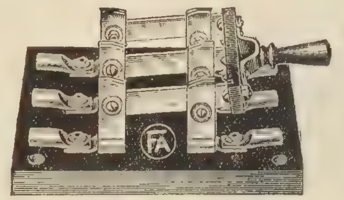
Single-Throw

Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*F 3320	30	2½	$2.50
F 3520	30	4¼	3.80
F 6320	60	4¼	4.20
F10320	100	8½	5.20
F20320	200	15½	9.50

Double-Throw

Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*F 3320T	30	4¾	$3.50
F 3520T	30	7¾	5.40
F 6320T	60	7¾	6.00
F10320T	100	13	8.00
F20320T	200	25	14.20

FA Type F Knife Switches



Formed Clip
3-Pole—Unfusible

Front Connection—Plain Finish

250 Volts D.C. or 500 Volts A.C.

Single-Throw

Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*F 3330	30	3¾	$3.80
F 3530	30	6¼	5.40
F 6330	60	6¼	6.00
F10330	100	11½	7.70
F20330	200	22½	14.00

Double-Throw

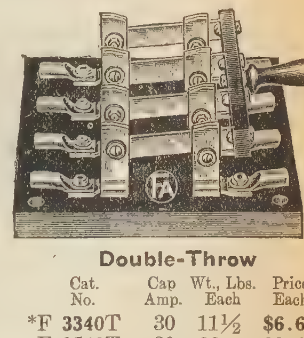
Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*F 3330T	30	7	$5.00
F 3530T	30	11½	8.00
F 6330T	60	11½	8.90
F10330T	100	17½	12.20
F20330T	200	32	21.90

FA Type F Knife Switches

Formed Clip
4-Pole—Unfusible

Front Connection—Plain Finish

250 Volts D.C. or 500 Volts A.C.



Single-Throw

Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*F 3340	30	6½	$4.60
F 3540	30	12	7.00
F 6340	60	12	7.80
F10340	100	19½	10.50
F20340	200	32½	18.30

Double-Throw

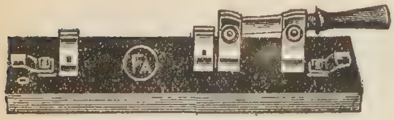
Cat. No.	Cap Amp.	Wt., Lbs. Each	Price Each
*F 3340T	30	11½	$6.60
F 3540T	30	20	10.60
F 6340T	60	20	11.80
F10340T	100	29	16.20
F20340T	200	45½	29.00

*For 250 volts d.c. only.

FA Type F Knife Switches

Formed Clip

Single-Pole—Fusible at Bottom



Front Connection
Plain Finish

250 Volts D.C.
or A.C.

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
F 3311	30	2¾	$2.20	F 3311T	30	5¼	$3.00
F 6311	60	4½	3.40	F 6311T	60	7¾	4.80
F10311	100	7¾	4.20	F10311T	100	12½	6.90
F20311	200	11¾	7.00	F20311T	200	20	12.40

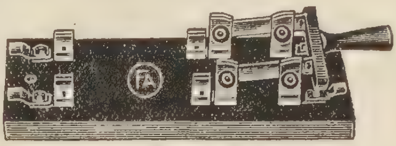
FA Type F Knife Switches

Formed Clip

Double-Pole—Fusible at Bottom

Front Connection
Plain Finish

250 Volts D.C.
or A.C.

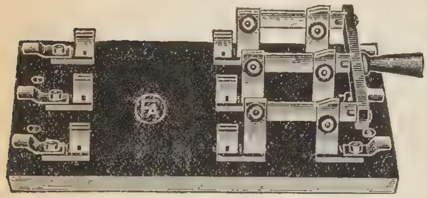


Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
F 3322	30	4½	$3.40	F 3322T	30	8¾	$5.50
F 6322	60	7½	5.40	F 6322T	60	12½	9.30
F10322	100	13½	7.20	F10322T	100	26½	13.00
F20322	200	25	12.50	F20322T	200	37½	22.50

FA Type F Knife Switches

Formed Clip

3-Pole—Fusible at Bottom



Front Connection
Plain Finish

250 Volts D.C.
or A.C.

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
F 3333	30	6½	$4.60	F 3333T	30	13	$8.40
F 6333	60	11	8.10	F 6333T	60	18½	14.30
F10333	100	19½	10.60	F10333T	100	37½	19.50
F20333	200	35	19.20	F20333T	200	59½	33.40

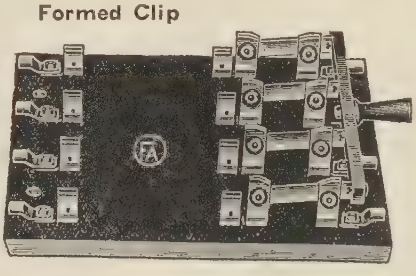
FA Type F Knife Switches

Formed Clip

4-Pole
Fusible at
Bottom

Front Connection
Plain Finish

250 Volts D.C.
or A.C.



Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
F 3344	30	9	$5.90	F 3344T	30	18	$11.00
F 6344	60	17	10.50	F 6344T	60	30	19.20
F10344	100	32½	14.70	F10344T	100	67½	25.40
F20344	200	57	25.70	F20344T	200	97	45.40

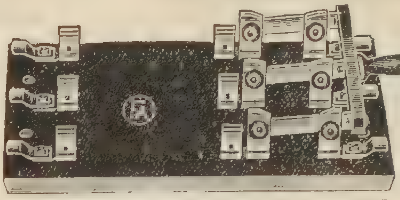
NOTE.—Double-throw switches will be furnished with fuse connections at both ends.

FA Type F Knife Switches

Formed Clip

With Cartridge Fuse Connections at Hinge End

Front Connection—Plain Finish
On Dead Black Finish Bases



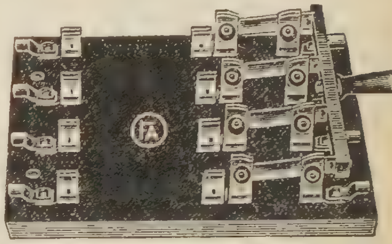
3-POLE

500 Volts A.C.
with 600-Volt
Fuse Connection

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
F 3533	30	11½	$8.30	F 3533T	30	20	$13.80
F 6533	60	15	9.90	F 6533T	60	20½	17.40
F10533	100	23	13.00	F10533T	100	38	20.80
F20533	200	35½	21.40	F20533T	200	61	36.10

4-POLE

500 Volts A.C.
with 600-Volt
Fuse Connection



Single-Throw				Double-Throw			
F 3544	30	20	$11.60	F 3544T	30	34½	$20.90
F 6544	60	29½	13.70	F 6544T	60	52	24.60
F10544	100	44	17.00	F10544T	100	94½	27.60
F20544	200	70	28.70	F20544T	200	117	47.40

Single and double-pole made to order at special prices.

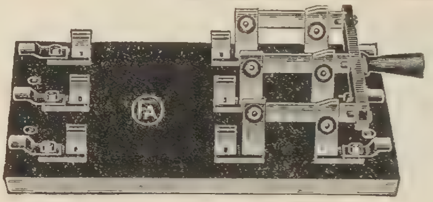
Double-throw switches will be furnished with fuse connections at both ends.

FA Type A Knife Switches

High Grade Milled In Clip

With Cartridge Fuse Connections at Hinge End

Front Connection—Satin Finish
On Dead Black Finish Bases



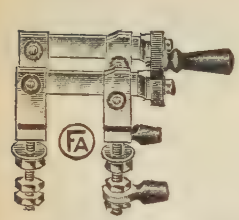
500 Volts A.C.
with 600-Volt
Fuse Connection

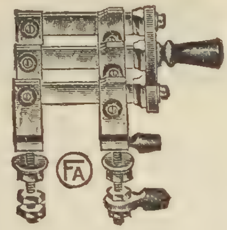
Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
3-POLE							
A 3533	30	13¾	$14.10	A 3533T	30	31	$20.60
A 6533	60	15½	14.30	A 6533T	60	41	25.90
A 10533	100	25	22.20	A 10533T	100	43	37.80
A 20533	200	36	31.90	A 20533T	200	71	56.20
A 40533	400	72½	57.50	A 40533T	400	135	97.40
A 60533	600	94	89.00	A 60533T	600	184	159.20
A 80533	800	157	197.00	A 80533T	800	235	318.90
A100533	1000	174	247.40	A100533T	1000	255	409.60
A120533	1200	188	293.60	A120533T	1200	275	478.60
4-POLE							
A 3544	30	17½	$19.40	A 3544T	30	42	$33.60
A 6544	60	27½	19.70	A 6544T	60	55	34.80
A 10544	100	39	29.50	A 10544T	100	87	49.60
A 20544	200	61	43.00	A 20544T	200	107	74.50
A 40544	400	105	79.00	A 40544T	400	184	125.10
A 60544	600	132	119.30	A 60544T	600	214	212.20
A 80544	800	203	262.60	A 80544T	800	304	431.70
A100544	1000	225	335.00	A100544T	1000	348	546.00
A120544	1200	247	394.40	A120544T	1200	392	637.90

Single and double-pole made to order at special prices.

Double-throw switches will be furnished with fuse connections at both ends.

FA Type B Knife Switches
High Grade Milled In Clip
Without Fuse Connections
Back Connection—Satin Finish—Unmounted
250 Volts D.C. or 500 Volts A.C.





SINGLE-POLE

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*B 3310	30	1	$3.00	*B 3310T	30	1¼	$4.30
B 3510	30	1¼	3.40	B 3510T	30	1½	4.70
B 6310	60	1¼	3.80	B 6310T	60	1½	5.30
B 10310	100	2½	5.00	B 10310T	100	3	6.80
B 20310	200	4½	7.80	B 20310T	200	5½	11.00
B 40310	400	9½	14.70	B 40310T	400	11½	20.40
B 60310	600	15	22.40	B 60310T	600	19	31.20
B 80310	800	18	47.10	B 80310T	800	23	69.70
B100310	1000	20	58.70	B100310T	1000	26	88.40
B120310	1200	26½	70.20	B120310T	1200	41	104.60
†B150310	1500	31	88.40	†B150310T	1500	61	133.90
†B200310	2000	47	111.50	†B200310T	2000	80½	170.20

DOUBLE-POLE

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*B 3320	30	1½	$6.20	*B 3320T	30	1¾	$7.80
B 3520	30	2	6.60	B 3520T	30	2½	9.30
B 6320	60	2	7.40	B 6320T	60	2½	10.30
B 10320	100	4	9.50	B 10320T	100	5	13.30
B 20320	200	7½	15.40	B 20320T	200	9	21.40
B 40320	400	16	28.70	B 40320T	400	19	40.10
B 60320	600	25	43.70	B 60320T	600	32	61.30
B 80320	800	30	92.70	B 80320T	800	38	137.90
B100320	1000	33	116.70	B100320T	1000	43	174.60
B120320	1200	44	139.10	B120320T	1200	68	209.00
†B150320	1500	52	174.80	†B150320T	1500	102	265.80
†B200320	2000	78	221.00	†B200320T	2000	134	338.60

3-POLE

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*B 3330	30	2¼	$8.90	*B 3330T	30	2½	$12.20
B 3530	30	3	9.80	B 3530T	30	3¾	13.90
B 6330	60	3	10.90	B 6330T	60	3¾	15.40
B 10330	100	6	13.80	B 10330T	100	7½	19.50
B 20330	200	11	22.60	B 20330T	200	13½	31.70
B 40330	400	24	42.40	B 40330T	400	28½	59.40
B 60330	600	37	64.00	B 60330T	600	48	90.50
B 80330	800	45	138.20	B 80330T	800	57	206.00
B100330	1000	50	173.50	B100330T	1000	65	260.20
B120330	1200	66	206.60	B120330T	1200	102	311.00
†B150330	1500	79	260.40	†B150330T	1500	153	397.00
†B200330	2000	116	329.50	†B200330T	2000	200	505.90

4-POLE

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
*B 3340	30	3	$11.80	*B 3340T	30	4½	$16.40
B 3540	30	4	13.20	B 3540T	30	5	18.60
B 6340	60	4	14.60	B 6340T	60	5	20.70
B 10340	100	8	18.50	B 10340T	100	10	26.00
B 20340	200	15	30.20	B 20340T	200	18	42.50
B 40340	400	32	57.10	B 40340T	400	38	79.80
B 60340	600	50	86.20	B 60340T	600	64	121.30
B 80340	800	60	184.00	B 80340T	800	76	255.90
B100340	1000	66	230.60	B100340T	1000	86	346.60
B120340	1200	88	275.00	B120340T	1200	136	415.00
†B150340	1500	104	345.90	†B150340T	1500	204	528.20
†B200340	2000	156	438.00	†B200340T	2000	268	673.30

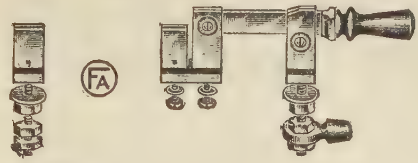
*For 250 volts d.c. only.
†Give size wire used so proper size lugs can be sent.

For switches mounted on slate or wood templates, add 50% up to 200 amperes, and 25% for everything over.

For polished finish, add 25%

Unless otherwise specified, all switches will be furnished for 1½-inch panel mounting.

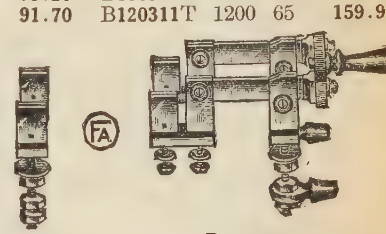
FA Type B Knife Switches
High Grade Milled In Clip
With Cartridge Fuse Connections at Hinge End
Back Connection—Satin Finish—Unmounted



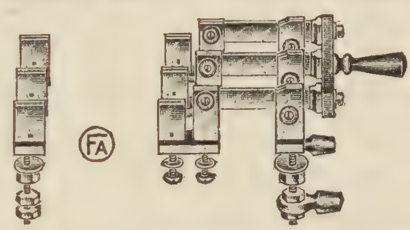
SINGLE POLE
250 Volts D.C. or A.C.

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
B 3311	30	1	$3.40	B 3311T	30	1¼	$4.90
B 6311	60	1½	4.20	B 6311T	60	1¾	6.20
B 10311	100	3	6.70	B 10311T	100	3¾	10.30
B 20311	200	5½	10.10	B 20311T	200	8	15.70
B 40311	400	11½	18.90	B 40311T	400	15	28.70
B 60311	600	18	28.80	B 60311T	600	23	44.90
B 80311	800	27½	62.70	B 80311T	800	33	106.30
B100311	1000	30½	78.20	B100311T	1000	36	133.40
B120311	1200	44½	91.70	B120311T	1200	65	159.90

DOUBLE POLE
250 Volts D.C. or A.C.



Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
B 3322	30	1¾	$6.70	B 3322T	30	2	$9.70
B 6322	60	2½	8.50	B 6322T	60	3	12.80
B 10322	100	5¼	13.20	B 10322T	100	6¼	20.30
B 20322	200	9	19.80	B 20322T	200	13	31.00
B 40322	400	19	37.00	B 40322T	400	25	56.70
B 60322	600	30	56.50	B 60322T	600	39	88.60
B 80322	800	46	123.10	B 80322T	800	55	209.50
B100322	1000	51	153.80	B100322T	1000	61	263.90
B120322	1200	74	181.20	B120322T	1200	109	317.50



3-POLE
250 Volts D.C. or A.C.

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
B 3333	30	2¾	$9.80	B 3333T	30	3	$14.20
B 6333	60	3½	12.40	B 6333T	60	4½	18.40
B 10333	100	8	19.40	B 10333T	100	9½	30.00
B 20333	200	13½	29.10	B 20333T	200	19½	45.90
B 40333	400	28½	54.80	B 40333T	400	37	84.00
B 60333	600	45	83.30	B 60333T	600	59	135.40
B 80333	800	69	183.80	B 80333T	800	82	313.40
B100333	1000	76	229.00	B100333T	1000	91	393.80
B120333	1200	111	270.20	B120333T	1200	163	474.70

4-POLE
250 Volts D.C. or A.C.

Single-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each	Double-Throw Cat. No.	Cap. Amp.	Wt., Lbs. Each	Price Each
B 3344	30	2½	$13.00	B 3344T	30	4	$19.00
B 6344	60	5	16.80	B 6344T	60	6	24.80
B 10344	100	10½	25.80	B 10344T	100	12½	40.00
B 20344	200	18	38.70	B 20344T	200	26	61.10
B 40344	400	38	73.70	B 40344T	400	50	121.00
B 60344	600	60	111.80	B 60344T	600	78	183.90
B 80344	800	92	243.90	B 80344T	800	110	416.40
B100344	1000	102	304.60	B100344T	1000	122	516.30
B120344	1200	148	359.30	B120344T	1200	218	632.00

For switches on slate or wood template, add 25%. For polished finish, add 25%. Unless otherwise specified, all switches will be furnished for 1½-inch panel mounting.

Double-throw switches will be furnished with fuse connections at both ends.

Type A Trumbull Switches

Front Connections—Plain Finish

250 Volts D.C. and 500 Volts A.C.

Unmounted switches without slate bases, deduct 10%. 125-volt spacings same price as 250-volt. The 2 and 3-pole switches, 800 amperes and above, and all 4-pole switches are regularly equipped with spade handles. Single-pole switches, 30-1200 amperes have straight handle. Multiple blades are regularly used on switches 800 amperes and above.

Single Throw—No Fuse

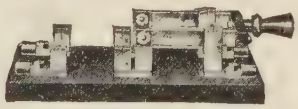
Cap. Amp.	Single-Pole Cat. No.	Single-Pole Price Each	Double-Pole Cat. No.	Double-Pole Price Each	3-Pole Cat. No.	3-Pole Price Each	4-Pole Cat. No.	4-Pole Price Each
*30	3721	$.80	3801	$1.20	3881	$1.80	3961	$2.40
30	3721½	1.14	3801½	1.64	3881½	2.48	3961½	3.30
60	3722	1.20	3802	1.78	3882	2.68	3962	3.56
100	3724	2.25	3804	3.38	3884	5.08	3964	6.76
200	3726	3.48	3806	5.20	3886	7.80	3966	10.40
300	3728	5.34	3808	8.00	3888	12.00	3968	17.00
400	3729	8.14	3809	12.20	3889	18.30	3969	25.94
600	3731	11.54	3811	17.30	3891	25.96	3971	36.78
800	3732	20.00	3812	30.00	3892	45.00	3972	60.00
1200	3734	27.34	3814	41.00	3894	61.50	3974	82.00
1600	3735½	51.60	3815½	77.50	3895½	116.20	3975½	158.75
2000	3736	57.50	3816	86.50	3896	129.50	3976	173.00

*For 250 volts only.

Type A Trumbull Switches

Front Connections
Plain Finish

250 Volts D.C. and A.C.



Unmounted switches without slate bases deduct 10%. Prices do not include fuses.

Single Throw—Fusible Bottom—N.E.C. Standard High Posts

Cap. Amps.	Single-Pole Cat. No.	Single-Pole Price Each	Double-Pole Cat. No.	Double-Pole Price Each	3-Pole Cat. No.	3-Pole Price Each	4-Pole Cat. No.	4-Pole Price Each
30	4361	$1.18	4381	$1.76	4401	$2.64	4421	$3.52
60	4362	1.74	4382	2.60	4402	3.90	4422	5.20
100	4364	3.34	4384	5.00	4404	7.50	4424	10.00
200	4366	5.14	4386	7.70	4406	11.56	4426	15.40
400	4368	11.64	4388	17.46	4408	26.20	4428	37.10
600	4370	16.34	4390	24.50	4410	36.75	4430	52.06
800	4371	26.34	4391	39.50	4411	59.25	4431	79.00
1200	4373	35.68	4393	53.50	4413	80.25	4433	107.00

Type A Trumbull Switches

Front Connections—Plain Finish

251-600 Volts D.C. and 501-600 Volts A.C.

Fusible Bottom—N.E.C. Standard—High Posts

Single Throw—With Quick Break Attachment

Cap. Amps.	Single-Pole Cat. No.	Single-Pole Price Each	Double-Pole Cat. No.	Double-Pole Price Each	3-Pole Cat. No.	3-Pole Price Each	4-Pole Cat. No.	4-Pole Price Each
30	9600	$2.18	9620	$3.92	9640	$6.30	9660	$8.66
60	9601	2.34	9621	4.26	9641	6.82	9661	9.38
100	9603	3.90	9623	7.10	9643	11.36	9663	15.62
200	9605	6.16	9625	11.20	9645	17.92	9665	24.64
400	9607	12.94	9627	23.50	9647	37.60	9667	51.70
600	9609	17.34	9629	31.50	9649	50.40	9669	69.30

Single Throw—Without Quick Break Attachment

30	9610	$1.84	9630	$3.32	9650	$5.34	9670	$7.34
60	9611	2.04	9631	3.70	9651	5.92	9671	8.14
100	9613	3.48	9633	6.30	9653	10.08	9673	13.86

Unmounted switches without slate bases, deduct 10 per cent. All 3 and 4-pole switches, 600-volt, regularly equipped with spade handles. No fuses included in prices.

Type C Trumbull Switches

Front Connections—Plain Finish

250 Volts D.C. and 500 Volts A.C.

Single Throw—No Fuse

Cap. Amps.	Single-Pole Cat. No.	Single-Pole Price Each	Double-Pole Cat. No.	Double-Pole Price Each	3-Pole Cat. No.	3-Pole Price Each	4-Pole Cat. No.	4-Pole Price Each
*30	3001	$.42	3041	$.68	3081	$1.02	5901	$1.36
30	3002	.66	3042	1.06	3082	1.60	5902	2.14
60	3003	.74	3043	1.22	3083	1.84	5903	2.44
100	3005	1.50	3045	2.50	3085	3.76	5905	5.00
200	3006	2.70	3046	4.50	3086	6.76	5906	9.00
			†Double Throw—No Fuse					
*30	3021	$.76	3061	$1.16	3101	$1.80	5921	$2.56
30	3022	1.16	3062	1.70	3102	2.66	5922	3.84
60	3023	1.30	3063	2.00	3103	3.10	5923	4.40
100	3025	2.94	3065	4.50	3105	6.90	5925	9.80
200	3026	4.88	3066	7.50	3106	11.60	5926	15.50

*For 250 volts d.c. only. †Double throw switches Type C are not made with quick break attachments.

All 4-pole switches regularly equipped with spade handles. Unmounted switches without slate bases, deduct 10 per cent. 125-volt spacings same price as 250-volt.

Type C Trumbull Switches

Front Connections—Plain Finish

250 Volts D.C. and A.C.

Single Throw—Fusible Bottom

N.E.C. Standard—High Posts

Cap. Amps.	Single-Pole Cat. No.	Single-Pole Price Each	Double-Pole Cat. No.	Double-Pole Price Each	3-Pole Cat. No.	3-Pole Price Each	4-Pole Cat. No.	4-Pole Price Each
30	1120	$.70	1130	$1.06	1140	$1.60	1150	$2.12
60	1121	1.18	1131	1.80	1141	2.70	1151	3.60
100	1123	2.38	1133	3.66	1143	5.50	1153	7.30
200	1124	4.40	1134	6.76	1144	10.14	1154	13.50

For unmounted switches without slate bases, deduct 10 per cent.

The 125-volt switches are the same price as 250-volt.

All 4-pole switches are regularly equipped with spade handles.

No fuses are included in the above prices.

Trumbull Kappa Switches

Front Connections—Plain Finish

250 Volts, 30 Amperes

For comparatively light work. Foot blocks and binding screws of brass. Hinge rivet spun over to prevent loosening.

Single Throw—No Fuse

Price, No. **20**, Single-Pole.....each **$.38**
Price, No. **22**, Double-Pole.....each **.60**
Price, No. **23**, Three-Pole.....each **.90**

Single Throw—Fusible N.E.C. Std. Bottom High Jaws

Price, No. **29**, Single-Pole.....each **$.64**
Price, No. **30**, Double-Pole.....each **.97**
Price, No. **31**, Three-Pole.....each **1.45**

Unmounted switches without slate bases, deduct 10 per cent. No fuses are included in above prices.

Trumbull Telephone or Battery Switches

25 Amperes—Slate Base—Front Connections

No. 14

All the telephone or battery switches are fitted with the return bend, self-adjusting type of clip, which is unusually suitable for this type of switch. Projections on posts prevent turning on bases.

Cat. No.	Style	Size of Base, Inches Length Width	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
14	D.P., S.T.	2½x2	20	8	$.45
15	D.P., D.T.	3⅝x2	10	6	.75
16	3P., S.T.	2½x3¼	10	6	.66
17	3P., D.T.	3⅝x3¼	10	8	1.10
18	4P., S.T.	2½x4½	10	9	1.00
19	4P., D.T.	3⅝x4½	5	6	1.70

Trumbull Telephone or Battery Switches

25 Amperes—Fiber Base—Front Connections

No. 7

No. 11

Fitted with return bend self-adjusting clip. Projections on posts prevent turning on bases.

With Composition Handle

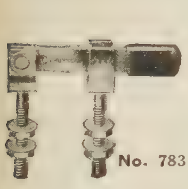
Cat. No.	Style	Base, Inches Length Width	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
7	S.P.,S.T.	2½x1⅛	20	40	6	$.22
8	S.P.,D.T.	3¾x1⅛	10	20	3½	.34
9	D.P.,S.T.	2½x2	10	20	5	.42
10	D.P.,D.T.	3¾x2	10	20	8	.65
40	3P., S.T.	2½x3¼	10	20	10	.75
41	3P.,D.T.	3¾x3¼	10	20	12	1.25
42	4P.,S.T.	2½x4⅜	10	20	12	1.10
43	4P.,D.T.	4¾x3⅜	10	20	20	1.75

With Black Enameled Handle

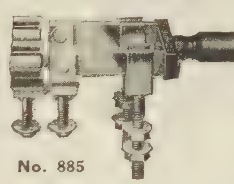
Cat. No.	Style	Base, Inches Length Width	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
11	S.P.,S.T.	2½x1⅛	20	40	5½	$.20
13	S.P.,D.T.	3¾x1⅛	10	20	3½	.32

Trumbull Telephone or Battery Switches

25 Amperes—Back Connections—Unmounted



No. 783



No. 885

No Fuse

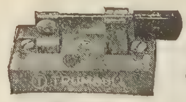
Cat. No.	Polished Each	Brush Each	Style	Std. Pkg.	Wt. Lbs. Std. Pkg.
783	$0.40	$0.30	S. P. S. T.	50	10
784	.56	.42	S. P. D. T	50	13
785	.80	.62	D. P. S. T.	50	18
786	1.16	.80	D. P. D. T.	25	10
787	1.20	.96	3 P. S. T.	25	10
788	1.74	1.25	3 P. D. T.	10	5
789	2.35	1.75	4 P. S. T.	10	5½
790	3.10	2.30	4 P. D. T.	10	8
791	2.70	2.00	5 P. S. T.	10	8
792	3.65	2.75	5 P. D. T.	10	10
793	3.25	2.45	6 P. S. T.	5	4
794	4.45	3.35	6 P. D. T.	5	5

Fusible

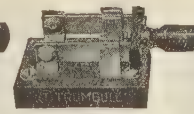
Cat. No.	Polished Each	Brush Each	Style	Std. Pkg.	Wt. Lbs. Std. Pkg.
883	.50	.38	S. P. S. T.	50	13
885	1.00	.78	D. P. S. T.	25	15
887	1.50	1.20	3 P. S. T.	25	20
889	2.15	1.56	4 P. S. T.	10	12

Trumbull Telephone or Battery Switches

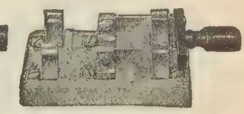
25 Amperes—Porcelain Base—Front Connections



No. 707



No. 709



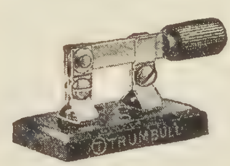
No. 710

Fitted with return bend, self-adjusting clip. Projections on posts prevent turning on bases.

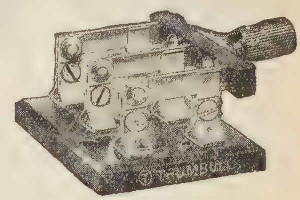
Cat. No.	Style	Base, Inches Length Width	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
707	S.P.,S.T.	2$\frac{7}{16}$x1¼	10	40	10	$.20
708	S.P.,D.T.	3⅝x1$\frac{5}{16}$	5	40	6	.32
709	D.P.,S.T.	2$\frac{7}{16}$x2	10	20	7	.35
710	D.P.,D.T.	3⅝x2	5	10	5	.50
711	3P.,S.T.	2$\frac{7}{16}$x3¼	5	10	6	.56
712	3P.,D.T.	3⅝x3¼	5	10	10	.90

Circle T Trumbull Radio Switches

Schedule B



No. 917, S. P. S. T.



No. 921, 3 P. S. T.

This line of small switches for radio work, is so designed as to stand up under the severest use to which they will be subjected, and at the same time to take up a minimum amount of space. Unusually strong and compact.

Connections can be made from either front or rear.

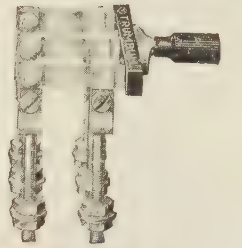
Contact screws are placed in the switch posts thus making the wiring easy. Four projecting corner points on each post hold the connecting wires in position after they have been fastened under the binding screws.

All metal parts are nickel-plated. Mounted on polished fibre base.

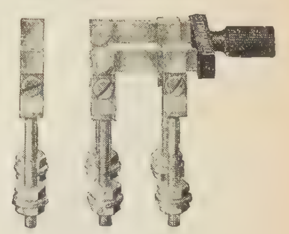
Cat. No.	Style	Base Inches	Carton	Std. Pkg.	Approx. Wt., Lbs. Std. Pkg.	Price Each
917	SPST	2 x1	20	40	6	$.30
918	SPDT	2⅞x1	10	20	5	.40
919	DPST	2 x1⅝	10	20	5	.50
920	DPDT	2⅞x1⅝	10	20	6	.70
921	3PST	2 x2½	10	20	8	1.00
922	3PDT	2⅞x2½	10	20	10	1.50

Circle T Trumbull Radio Switches

For Panel Mounting



No. 821 3 P., S.T.

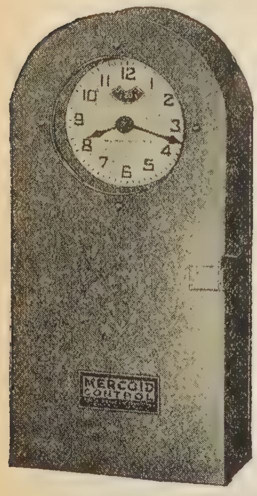


No. 820 D.P., D.T.

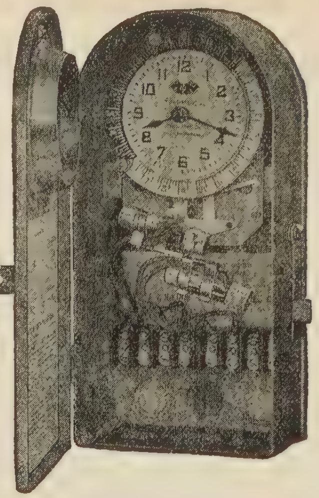
Cat. No.	Each	Style	Std. Pkg.	Wt. Lbs. Std. Pkg.
817	$.40	S. P. S. T.	50	3
818	.55	S. P. D. T.	50	4
819	.80	D. P. S. T.	50	4
820	1.15	D. P. D. T.	25	2½
821	1.20	3 P. S. T.	25	5
822	1.70	3 P. D. T.	10	3
823	2.35	4 P. S. T.	10	3
824	3.10	4 P. D. T.	10	4
825	2.70	5 P. S. T.	5	2
826	3.65	5 P. D. T.	5	2½
827	3.25	6 P. S. T.	5	2½
828	4.45	6 P. D. T.	5	3

Studs 1½-inch threaded 1-inch 8x32.

Mercoid-Triplex Time Switches



Type No. 402, Closed


Type No. 402, Open

With self-starting synchronous motor movement of the highest quality with heavy cut brass wheels and pinions turned and milled from tool steel, hardened and polished.

Has snap action switch mechanism with positive make and break of contact and locking in On and Off position. Operated by cams on bottom of On and Off clamps which are easily adjustable around the all-metallic finish, brass, rotating 24-hour or weekly program rim. Clamps can be set closely so the time switch will operate at times desired. Extra On and Off clamps may be used for additional operations. On and Off clamps may be set adjacent to each other, in which position switch will throw On and Off in 30 minutes with the 24-hour rim and in 3½ hours with the weekly program rim. Lever is provided for operating switch mechanism by hand, which also indicates On and Off position of switch.

Mercoid mercury tubes are used. There can be no open arcing, oxidation or corrosion. The contact is permanently clean and instantaneous in operation and will last indefinitely without deterioration.

Clock face has silver finished dial and time is quickly read from distinct hands and legible numerals. Seconds indicator rotates while current is on.

Clock is quickly set on time from center thumb screw without loosening On and Off clamps.

Steel housing is cadmium-plated to prevent rusting; has a gasketed, padlockable and sealable door opener. Mechanism is easily demountable by removing two screws.

Molded terminal block with wiring screws in bottom row for quick connection of line and load wires.

Dimensions of housing: height, 12 inches; width, 6⅜ inches; depth, 3⅞ inches.

Synchronous motor regularly shipped for connection to 110-volt 60-cycle current. If so specified on order can be furnished for connection to 220 volts 60 cycles or for 110 or 220 volts 50 cycles.

Packed 10 in a standard package.

Approximate shipping weight, 7 pounds.

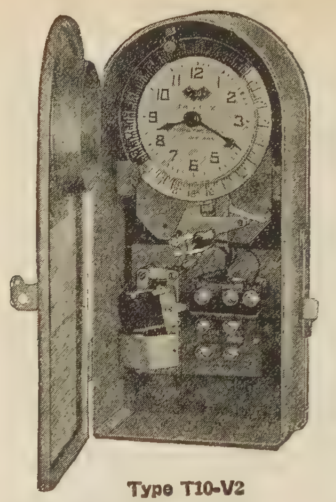
		Cap. Amps. 110 or 220 Volts, A.C.		24-Hour Dial		Weekly Program Dial	
No. Poles	Throw	*Per Circuit	Total	Type No.	Each	Type No.	Each
1	Single	20	20	**201**	**$32.00**	**7201**	**$40.00**
2	Single	20	†40	**402**	**39.00**	**7402**	**47.00**
1	Double	20	20	**202**	**39.00**	**7202**	**47.00**

Additional On and Off Clamps................per set **$.50**

*May be used to control 1-h.p. a.c. repulsion-induction motor or ¼-h.p. a.c. split phase motor.

†Type No. 402 may be connected to control two separate 20-ampere single-pole circuits or a 20-ampere double-pole circuit.

Mercoid-Triplex Time Switches


Type T10-V2

Combination Type

Illustration shows Mercoid Type V Transformer Relay installed in Triplex Time Switch housing. This relay meets the severe service conditions encountered with frequently operating automatic equipment such as oil burners, stokers, air conditioners, etc. Also for many other operations requiring thoroughly dependable remote control.

When used in combination with Triplex Time Switch, the switch may be set to connect day or night thermostat to relay or to control (by time) the relay operation when used for other purposes.

Prices on application.

Cast Iron Weatherproof Housing

This type is furnished for outdoor installations.

A heavy wing nut compresses soft rubber door gasket against case.

Height, 13½ inches; width, 8¼ inches; depth, 4½ inches.

Approximate shipping weight, 20 pounds.

Type W, without Glass Opening in Cover ....extra **$8.00**
Type WO, with Glass Opening........extra **10.00**
Padlock with 2 Keys ....extra **2.00**

Special Mounting

Illustration shows Triplex Time Switch mounted on bakelite plate without steel housing. Overall dimensions: 7 inches high, 5½ inches wide, 2⅝ inches deep. This type can be mounted in traffic light housings, on panel boards, or with equipment where housing is not required.

Snap action switch mechanism can be furnished with Mercoid tube or tubes to provide: Single pole, double pole, single pole double throw, and with smaller capacity tubes for single, double, triple or 4 pole; single or double throw.

Prices on application.

Triplex Weekly Program Dial

This dial makes one revolution in 7 days. Each day is provided with On and Off clamps, easily adjustable to daily schedule. Clamps may be removed from the rim for any day or days; switch will then remain in last position thrown until the next clamp operates. For example, in heating a school, night thermostat can remain in control from Friday at 4 P.M. until Monday morning at 7 when day thermostat is connected.

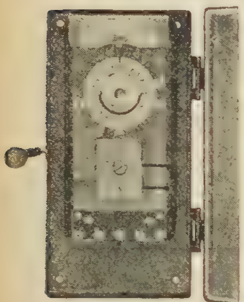
Sauter Time Switches

The general purpose of a time switch is to automatically close an electrical circuit for a desired number of hours, usually once or twice a day.

Sauter Time Switches are accurately designed with rugged and precision workmanship throughout. They have been endorsed by many of the foremost electric light and power companies, outdoor advertising companies and are used by the U. S. Government for airways beacon control.

Synchronous Motor Time Switches

Single or Double Circuit—A.C.—110 or 220 Volts



The Type ZY switch consists of a 2 to 3-watt self-starting slow speed 200-r.p.m. subsynchronous motor, a precision-made gear train with highly polished pinions, a quick-make quick-break laminated copper contact with silver arcing tips, a plain 24-hour dial adjustable to any desired schedule and a pressed steel dustproof case with ample room for wiring and convenient knockouts for conduit connections.

Symbol	Stock No.	*Each	Amps. per Pole	No. of Poles	Throw	Dimensions Inches Ht.	Wdth.	Dpth.
ZY-15-I	11	$30.00	15	2	Sgl.	10⅝	6¼	4½
ZY-15-II	12	33.00	15	2	Sgl.	10⅝	6¼	4½
ZYU-10-I	**21	30.00	10	1	Dbl.	10⅝	6¼	4½
ZY-15-III-K	†31	45.00	15	3	Dbl.	10⅝	6¼	5
ZY-15-II-K	‡32	45.00	15	2	Dbl.	10⅝	6¼	5

Low Capacity Self-Winding Escapement Switches

Single Throw—A.C. and D.C.—110-220 Volts

These switches consist of a large precision-made clock movement having a 4-day running reserve mainspring and a 7-jewelled escapement (ZEE has 13 jewels) compensated for temperature fluctuations. The clockspring is automatically wound each day by a 20-watt 110–220-volt motor which operates satisfactorily on frequencies of from 25 to 80 cycles and at voltages 20 per cent above or below rated voltage. Except for the 10 to 30 seconds required to wind the clockspring, this motor is entirely disconnected from the line.

Provided with a quick-make quick-break laminated copper contact with silver arcing tips, a plain 24-hour dial adjustable to any desired schedule, and a pressed steel dustproof case with ample room for wiring and convenient knockouts for conduit connections.

Symbol	Stock No.	*Each	Type of Current	Amps. per Pole	No. of Poles	Dimensions Inches Ht.	Wdth.	Dpth.
ZWE-2-I	41	$57.00	A.C.	2	Sgl.	10⅝	6¼	5½
ZWE-15-I	51	58.00	A.C.	15	Sgl.	10⅝	6¼	5½
ZWE-15-II	61	60.00	A.C.	15	Dbl.	10⅝	6¼	5½
ZEE-2-I	201	75.00	A.C.-D.C.	2	Sgl.	12½	6¼	5½
ZEE-15-I	211	80.00	A.C.-D.C.	15	Sgl.	12½	6¼	5½
ZEE-15-II	221	85.00	A.C.-D.C.	15	Dbl.	12½	6¼	5½

*Prices include switch with plain 24-hour dial and dustproof case. Add $10.00 for weatherproof case and $17.00 for astronomic dial.

**A single-pole double-throw switch with no open position. Used for any 3-wire control system.

†A 2-circuit switch; operates in the following sequence: Circuit 1, On; circuits 1 and 2, On—all Off. Circuit 1 is controlled by 15-ampere 2-pole switch; circuit 2 by a 15-ampere single-pole switch. Total capacity, 4950 watts.

‡A 2-circuit switch; operates in the following sequence: Circuits 1 and 2, On; circuit 1, Off; circuits 1 and 2, Off. Both circuits controlled by a 15-ampere single-pole switch. Total capacity, 3300 watts.

Sauter Time Switches

Heavy Duty Motor-Operated Self-Winding or Synchronous Time Switches

Single and Double Circuit—A.C. and D.C.
110-220 Volts

These switches consist of a self-winding escapement or synchronous clock. Heavy duty switches differ from low capacity switches in that the main switch contacts are operated by a motor rather than by the time dial. The use of this motor permits the design of a high pressure copper-to-copper butt contact with a quick double-make and double-break action. These contacts are good for a constant overload of 25 per cent.

All motor-operated switches are provided with a plain 24-hour dial adjustable to any desired schedule and a pressed steel dustproof case with conduit connection boxes for ease in wiring. An astronomic dial to automatically operate the switch in step with sunset or sunrise, and a cast iron weatherproof or immersion-proof case can be supplied if desired.

Symbol	Stock No.	Each	Amps. per Pole	No. of Poles	Throw	Dimensions Inches Ht.	Wdth.	Dpth.
ZM-25-II	321	†$105.00	25	2	Sgl.	14½	9½	6
ZM-40-II	341	† 110.00	40	2	Sgl.	14½	9½	6
ZM-40-III	351	‡ 116.00	40	3	Sgl.	17	10½	6¾
ZM-60-II	361	‡ 132.00	60	2	Sgl.	23½	7½	6
ZM-60-III	371	‡ 150.00	60	3	Sgl.	23½	7½	6
ZMA-15-II	*511	‡ 100.00	15	2	Dbl.	17	10½	6¾
ZMA-40-II	*513	‡ 135.00	40	2	Dbl.	17	10½	6¾
ZMU-10-I	**551	‡ 100.00	10	1	Dbl.	17	10½	6¾
ZMU-30-I	**555	‡ 135.00	30	1	Dbl.	17	10½	6¾
ZMZ-15-II	***571	‡ 100.00	15	2	Dbl.	17	10½	6¾
ZMZ-40-II	***573	‡ 135.00	40	2	Dbl.	17	10½	6¾

When synchronous motor clock is desired, deduct $20.00 from price

Add for astronomic dial, $17.00.

Add for week-end and holiday cut-out, $25.00.

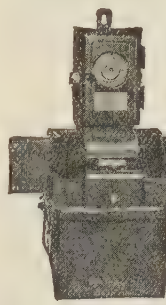
*Two-circuit switches; operate in following sequence: Circuit 1 and 2, On simultaneously; circuit 1, Off; circuit 2, Off.

**Momentary contact switches; operate as follows: Circuit 1, On momentarily (6 to 8 seconds); circuit 2, On momentarily (6 to 8 seconds).

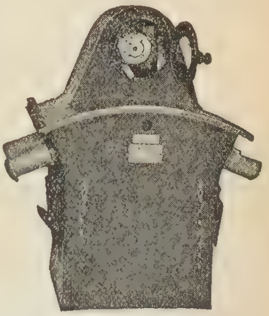
***Two-circuit switches; operate in following sequence: Circuit 1, On; Circuit 2, On; circuits 1 and 2, Off simultaneously.

Add for weatherproof or immersion-proof housing: †$20.00; ‡$25.00.

Other Sauter Time Switches Available



Symbol ZMO



Symbol HZ

Also available: 110–220-volt switches up to 300 amperes; 4600 and 8000-volt switches up to 50 amperes, and many 110–220-volt switches having special sequences. Prices upon application.

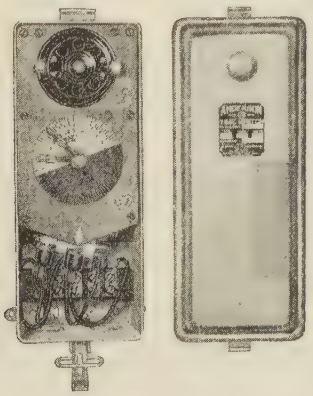
Ordering Information

When ordering specify type, ampere rating, number of poles, voltage, whether A.C. or D.C., frequency, type of dial, type of case, and on 2-circuit switches give switch sequence.

Anderson Automatic Time Switches

Universal Motor Wound with Mercury Tube Contacts

110 and 220 Volts D.C. or A.C. 60 to 25 Cycles



No. 11901

This type, having a reserve power in the spring of from 12 to 52 hours, is particularly suited for use in circuits that are subject to line interruptions.

For Season Changing Device (Astronomical Dial) add $20.00 list.

For Wooden Housing complete with porcelain tubes, add $10.00 list.

Approximate dimensions 13 inches high, 4½ inches wide and 4¼ inches deep.

Approximate weight net 9 pounds.

Approximate weight boxed 12 pounds.

Type MSD Single Pole Single Throw

Amps.	110 Volts A.C. No.	Each	220 Volts A.C. No.	Each	110 Volts D.C. No.	Each	220 Volts D.C. No.	Each
10	11912	$52.00	11920	$55.00	11912	$52.00	11924	$55.00
20	11913	54.00	11921	57.00	11913	54.00	11925	57.00
30	11914	57.00	11922	60.00	11923	61.00	11926	64.00

Type MSF Double Pole Single Throw

10	11900	$54.00	11930	$57.00	11900	$54.00	11934	$57.00
20	11901	57.00	11931	60.00	11901	57.00	11935	60.00
30	11902	60.00	11932	63.00	11933	67.00	11936	70.00

Type MSDH Single Pole Double Throw

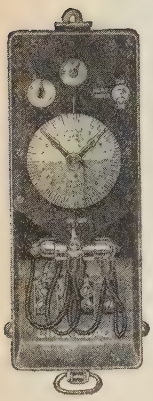
10	11906	$54.00	11940	$57.00	11906	$54.00	11944	$57.00
20	11907	56.00	11941	59.00	11907	56.00	11945	59.00
30	11908	59.00	11942	62.00	11943	63.00	11946	66.00

Type MSFH Double Pole Double Throw

10	11909	$56.00	11950	$59.00	11909	$56.00	11954	$59.00
20	11910	59.00	11951	62.00	11910	59.00	11955	62.00
30	11911	62.00	11952	65.00	11953	69.00	11956	72.00

Self-Starting Synchronous Motor Driven with Mercury Tube Contacts

110 and 220 Volts A.C. 60 Cycles, For Use On Regulated Circuits



No. 11801

Type TMD Single Pole Single Throw

Amps.	110 Volts A.C. Cat. No.	List Price	220 Volts A.C. Cat. No.	List Price
10	11812	$40.00	11820	$42.00
20	11813	42.00	11821	44.00
30	11814	45.00	11822	47.00

Type TMF Double Pole Single Throw

10	11800	$42.00	11830	$44.00
20	11801	45.00	11831	47.00
30	11802	48.00	11832	50.00

Type TMDH Single Pole Double Throw

10	11806	$42.00	11840	$44.00
20	11807	44.00	11841	46.00
30	11808	47.00	11842	49.00

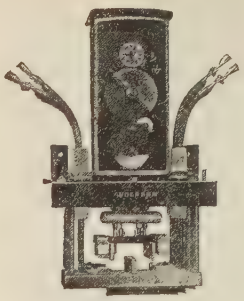
Type TMFH Double Pole Double Throw

10	11809	$44.00	11850	$46.00
20	11810	47.00	11851	49.00
30	11811	50.00	11852	52.00

Anderson Automatic Time Switches

Double or Triple-pole, High Tension, Oil Break

Type L Eight Day, Hand Wound



This type of switch is constructed for handling alternating current up to and including 6600 volts, and is furnished either two or three-pole. This apparatus is used in connection with small current transforming apparatus where the lamps can safely be connected to the secondary coil of transformer in its position of maximum voltage. Prices listed below are for complete apparatus, including oil chamber and sufficient oil to fill same to working level.

For Potentials Not Exceeding 3300 Volts

No.	Cap. Amps.	No. of Poles	Dimensions, Inches High with Terminals	Width	Depth	Ship. Wt., Lbs.	Each
11039	25	2	20½	11	7	83	*$120.00
11040	50	2	20½	11	7	83	*130.00
11043	25	3	21	14	7	102	†144.00
11044	50	3	21	14	7	102	†160.00
			For Potentials Not Exceeding 6600 Volts				
11080	25	2	20½	11½	8	94	†$150.00
11081	50	2	20½	11½	8	94	†160.00
11084	25	3	22	19	8	129	‡180.00
11085	50	3	22	19	8	129	‡196.00

For the Sunday or holiday cut-out attachment installed in any of the above, add $14.00 to price.

For the double daily operation attachment installed in any of the above, add $14.00 to price.

For the time extension device installed in any of the above, add $14.00 to price.

Type L Switches may have either the time extension or the double daily operation attachment, but cannot have both.

A 110-volt heating coil in switch tank only, is standard equipment in all the above. 220-volt coil supplied if so stated on order.

Type SL Electrically Wound, Fully Automatic

The Type SL is for controlling circuits up to 6600 volts. The switch is so designed that the current has a quick-make and break and is opened and closed in a tank of oil.

Prices listed below are for complete apparatus, including oil chamber and sufficient oil to fill same to working level.

Specify on order full particulars of winding circuit.

For Potentials Not Exceeding 3300 Volts

No.	Cap. Amp.	No. of Poles	Dimensions, Inches High with Terminals	Wide	Deep	Ship. Wt., Lbs.	Each
11098	25	2	22	11	8	92	*$200.00
11099	50	2	22	11	8	92	*210.00
11100	25	3	22½	14	8½	110	†224.00
11101	50	3	22½	14	8½	110	†240.00
			For Potentials Not Exceeding 6600 Volts				
11102	25	2	22	11½	9	102	†$230.00
11103	50	2	22	11½	9	102	†240.00
11104	25	3	23½	19	9	137	‡260.00
11105	50	3	23½	19	9	137	‡276.00

*One gallon of oil, included in list price, shipped with each switch.

†Two gallons of oil included in list price, shipped with each switch.

‡Three gallons of oil included in list price, shipped with each switch.

The Sunday or holiday cut-out attachment, the double daily operation attachment and the time extension device cannot be put in any Type SL Electrically Wound Time switch.

A 110-volt heating coil in switch tank only, is standard equipment in all the above. 220-volt coil supplied if so stated on order.

For season changing device (Astronomical Dial) add $20.00 to price.

Wooden housings complete for all L and SL Switches: For the 25 and 50-ampere, 2 and 3-pole 3300 volts, and the 2-pole 6600 volts add $20.00 to list price; for the 3-pole 25 and 50-ampere 6600 volts add $28.00 to list price.

Dunco Relays

Midget Relays

Type ADBX1

Used for the control of heaters, signals, small motors, etc.

Wiping contacts are of fine silver.

The shading coil of Dunco design insures quiet a.c. operation.

Base size, 2¾x1⅞ inches.

Coils: a.c., 60 cycles, 6 to 150 volts; d.c., 2 to 60 volts.

Contacts: 110 volts a.c., 6 amperes; 220 volts a.c., 3 amperes; 115 volts d.c., 1 ampere. Non-inductive load.

Type ABTX1, S.P., D.B., Front Contact.......each **$3.85**
Type ADBX1, D.P., S.B., Front Contact.......each **4.95**
Type BSBX1, S.P., S.B., Back Contact.........each **3.85**
Type BDBX1, D.P., S.B., Back Contact........each **5.50**
Type CSBX1, S.P., S.B., D.T...................each **4.68**
Type CDBX1, D.P., S.B., D.T...................each **6.60**

Power Relays

Type ABYS8

Used for the control of heaters, signals, small motors, etc.

Wiping contacts are of fine silver; adjustable tension; quiet a.c. operation.

The use of finest materials together with careful, individual attention during manufacture and inspection make these carefully designed relays dependable.

Types ABYS8 and ADBT8 are also approved for 1 h.p.

Type	Each	Contact Arrangement	Base Size In.	Contact Rating Amperes 110 V. A.C.	220 V. A.C.	115 V. D.C.
ABYS8	**$6.60**	S.P., D.B., Front Contact.	4¼x3	30	20	6
ADBT8	**8.80**	D.P., S.B., Front Contact.	4¼x3	30	25	4
ATBD8	**11.00**	3-P., S.B., Front Contact.	4¼x3	30	25	4
AFBG8	**13.20**	4-P., S.B., Front Contact.	5 x5	30	25	4
BSBS8	**6.60**	S.P., S.B., Back Contact...	4¼x3	10	8	2
BBUK8	**8.80**	S.P., D.B., Back Contact..	5 x3	30	20	6
BDBK8	**11.00**	D.P., S.B., Back Contact..	5 x3	30	25	4
CSBT8	**8.80**	S.P., S.B., D.T.	4¼x3	8	6	2
CDBP8	**13.20**	D.P., S.B., D.T.	6¼x3	30	25	4
DDBP8	**15.40**	Same as CDBP8 except all Separate Circuits........	6¼x3	30	25	4

Type H3 Hinged Cover, Aluminum Finish K.O. Box ....each **$1.65**

Add $3.30 to price for 230-volt d. c. coils.

Mechanical Latch-In Electrical Release Relays

Used for push button control or similar applications.

One coil closes contacts, another opens contacts. Latching member is metal, locking against molded bakelite keeper. This latch construction guards against sticking or excessive wear. Moving contacts insulated from armature.

Base size, 4½x3¼ inches.

Type	A.C. Coils Each	D.C. Coils Each	Contact Breaking Arrangement	Main Contact Rating, Amperes 110 V. A.C.	220 V. A.C.	115 V. D.C.	230 V. D.C.
CS600B	....	**$7.70**	S.P., S.T., D.B.	30	20	6	3
CS601B	....	**8.80**	D.P., S.T., S.B.	30	25	4	2
CS609B	....	**8.80**	S.P., D.T., S.B.	8	6	2	.
CS600C	**$8.80**	....	S.P., S.T., D.B.	30	20	6	3
CS601C	**9.90**	....	D.P., S.T., S.B.	30	25	4	2
CS609C	**9.90**	....	S.P., D.T., S.B.	8	6	2	.

Type	Contacts Front	Back	Coil Voltages A.C. Min.	A.C. Max.	D.C. Min.	D.C. Max.	Cycles
CS600B	1	.	.	...	6	110	.....
CS601B	2	.	.	...	6	110	.....
CS609B	1	1	.	...	6	110	.....
CS600C	1	.	6	220	.	...	25/60
CS601C	2	.	6	220	.	...	25/60
CS609C	1	1	6	220	.	...	25/60

Add $4.40 for 230-volt d.c. coils.

Ordering Information Required

Voltage and frequency of coil line.

Nature of load relay contacts must handle.

If special operating characteristics are desired, explain fully.

Wiring diagrams of special circuits are often helpful.

Dunco Relays

3-Wire Relays

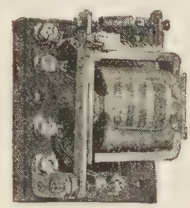
Used for the control of heaters, refrigerator units, pressure, etc. Protective resistor is a part of the relay. Instrument contacts make but never break current.

For use with 3-wire H-L-C instrument or push button.

Type	Each	Rating, Amperes 110 Volts A.C.	110 Volts D.C.	Base Size Inches
Used Where Control Circuit and Load are Fed by Same Line				
ABYT8PO	**$8.80**	30	6	4¼x3
ABTX1PO	**5.50**	6	1	2¾x1⅞
Used Where Control Circuit and Load are Fed by Different Lines				
ADBT8O	**$9.90**	15	2	4¼x3
ADBX10	**6.05**	6	1	2¾x1⅞

Type CXB51 Sensitive Relays

Wide application is possible in electronic tube circuits for radio, light sensitive cells and other uses where input to primary circuit of relay is small. Both fixed contacts and tension spring of relay are adjustable. Contacts open and close with a definite snap action.



Contacts: S.P., D.T., S.B. rated at 110 volts a.c., 2 amperes; d.c., ¼ ampere. Base size, 2⅞x2¼ inches. Can be supplied with coils consuming as little as 1/100 watts d.c., or 2/10 watts a.c.

Type CXB51, D.C. Coil....each **$5.50**
Type CXB51, A.C. Coil....each **7.70**
Hinged Cover K.O. Box....each **1.65**

Mercury Tube Relays

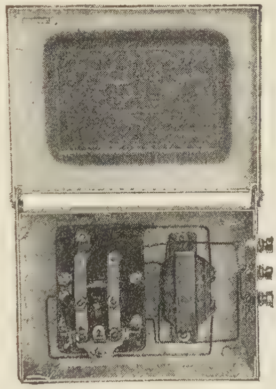
With enclosed contact break. Tilts tube with swinging action; assures smooth positive closure with minimum jar and shock. Mercury to mercury make and break.

Base size, 5x4 inches.

Type CXH1027, S.P., Front Contact...........each **$11.00**
Type CXA1028, S.P., Back Contact...........each **11.00**

Also with 2 or more tubes; prices upon application.

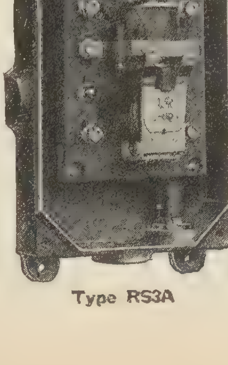
Relay Sets for Low-Voltage Thermostat Control


Type RS73

Complete with relay and transformer mounted in sheet metal housing with external binding posts for thermostat connections.

Type	Each	110 Volt A.C. Rating H.P.	Amps.
Used with 2-Wire Snap Action Thermostat			
RSA70	**$8.25**	¼	6
RS71	**11.00**	1	30
Used with 3-Wire H-L-C Thermostat			
RSA72B	**$9.35**	¼	6
RS73	**13.20**	1	15

Telephone Auxiliary Signalling Relays


Type RS3A

Type RS2.—Relay and condenser in H3 sheet metal, hinged cover housing. Signal remains on as long as circuit is closed.

Type RS2...........each **$11.00**

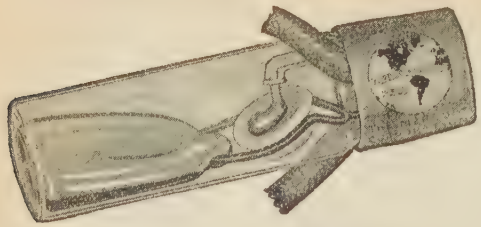
Type RSA2.—Same as Type RS2 except in W6 cast aluminum housing.

Type RSA2.........each **$17.60**

Type RS3A.—Relay, condenser and push button in W6 cast aluminum weatherproof housing. After telephone circuit once energizes relay the signal remains on until relay is released.

Type RS3A.........each **$23.20**

Mercoid Automatic Controls



Mercoid Controls have a wide application in both the domestic and industrial fields. They are generally employed for the control of motor driven automatic heating or refrigeration equipment, electric space or tank heaters, and for numerous industrial applications.

Equipped throughout with Mercoid sealed mercury contact switches.

The following are brief descriptions of several Mercoid Controls which are standard.

Sensatherm

A sensitive air type thermostat for low or high voltage requirements. Used for controlling automatic heating, refrigeration, or air conditioning equipment.

Furnished standard for low voltage to operate with the Mercoid Transformer-Relay. It can directly handle 50 watts or less on 110 or 220 volts without a relay. The standard range is 55° to 85° F. Other ranges are available. Total differential, 1° F. (plus or minus ½°).

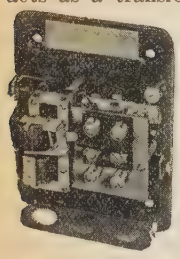
Sizes, 3 13/16 inches high, 1 11/16 inches wide, and 2¼ inches deep.

Gold finish with thermometer.

Type H, for Heating.....each **$10.00**
Type R, for Cooling.....each **10.50**

Type V Transformer-Relay

A reliable low voltage mercury contact relay, which also acts as a transformer inducing low voltage (24 volts) on the pilot circuit. Its construction does away with all hum and chatter.



Equipped with carefully taped and impregnated heavy duty coils.

Has a steel cabinet.

Rating, 10 amperes, 110 or 220 volts.

Type V, 60-Cycle.....each **$15.00**
Type V, 50-Cycle.....extra **1.00**
Type V, 25-Cycle.....extra **2.00**
Type V, D.C.....extra **2.50**

No. 855 Thermostat

Designed for direct control of motor operated automatic heating or refrigeration equipment, unit heaters or electric heaters, and various other industrial applications.

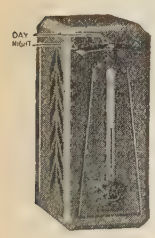
It is actuated by means of a sensitive bellows. The mercury enclosed contact switch is not affected by dust, dirt, or corrosive gases.

Single-pole, single throw. 10 Amps. 4 Amps.

No. **855**, for Heating, 56°–80°, 38°–60°...each **$22.50** **$21.00**
No. **855**, for Unit Heaters, 45°–72°.....each **22.50** **21.00**
No. **855**, for Refrigeration.....each **25.00** **23.50**

For thermometer on cover, add $1.50 to above lists.

Dual Sensatherm



Type HH Dual Sensatherm is generally used to lower the temperature at night and restore it to normal in the morning.

A clock is available for this instrument with a 7-day dial for setting daily programs a week in advance.

Also used with air conditioning equipment.

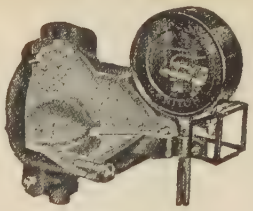
Type HH, Dual Heating.....each **$17.50**

Type HR can be furnished as a summer-winter thermostat. The individual adjustments permit close regulation at any desired temperature on both the heating and cooling units.

Type HR, Dual Heating and Cooling.....each **$18.00**

Mercoid Automatic Controls

No. 71 Pressure and Low Water Control



A combination control which prevents the hazard of firing into dry boilers and also guards against building up excessive steam pressure. Pressure setting can be raised or lowered by turning the adjustment screw.

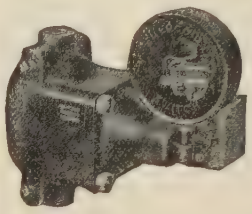
Available in numerous ranges for pressures up to 300 pounds. Standard range is 1 to 10 pounds, minimum differential, 3 pounds.

Furnished single-pole, 10 amperes, fully automatic to open circuit on a rising pressure or dropping float.

No. **71**, Single-Pole, 10 Amperes.....each **$36.00**
No. **71**, Single-Pole, 4 Amperes.....each **34.50**

Also available in lower or higher pressure ranges and with double-pole or 2-circuit switches.

No. 72 Low Water Control



Used as a safety limiting control to prevent automatic heating equipment from firing into a dry boiler. Also used with electrically operated boiler feed pumps to maintain the water level in the boiler.

When ordering, specify maximum pressure, specific gravity and kind of liquid controlled, electrical capacity, and whether circuit is to open or close when float rise. Furnished single-pole single throw.

10 Amps. 4 Amps.

No. **72**, for Pressures to 30 Pounds.....each **$30.00** .....
No. **72**, for Pressures to 150 Pounds.....each **34.00** **$32.50**
No. **72**, for 150 to 300 Pounds Pressure..each **54.00** **52.50**

For single-pole double throw or double-pole single throw add $4.00 to 10-ampere list and $2.50 to 4-ampere list.

No. 31 Pressure Control

A positive safety limiting device used on steam boilers. It is actuated by a Bourdon tube of great strength and elasticity. Standard range 1 to 10 pounds, differential 3 pounds. Can be furnished with steel Bourdon tube for unusual applications, or for pressures up to 3,000 pounds. Standard controls furnished for fully automatic operation, but can be supplied semi-automatic.

Unless otherwise specified, instrument will be shipped single-pole, 10-ampere rating to cut-out on rising pressure. When ordering special control, specify cut-in and cut-out points required, kind of substance controlled, and the maximum pressure to which the control will be subjected.

No. **31**, Single-Pole Single Throw, 10 Amperes..each **$16.00**
No. **31**, Single-Pole Single Throw, 4 Amperes...each **14.50**

Also available in lower or higher pressure ranges and with double-pole or 2-circuit switches.

No. 858 Pressure and Vacuum Control

Recommended for low pressure, steam, or vapor-vacuum boilers in connection with stokers, gas or oil burners, where close regulation is required. Also used for controlling refrigeration, brine pumps, air compressors, liquid by head pressure, etc.

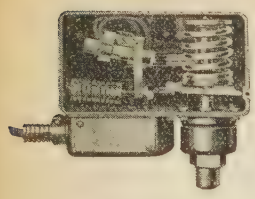
Has an adjustable operating range from 10 inches vacuum to 15 pounds pressure. Outside adjustments provided for setting both range and differential. Controls available for higher range on close operating pressure.

Unless otherwise specified, Model A-3 is furnished with 10-ampere Mercoid Switch to open circuit on rising pressure.

No. **858**, Single-Pole Single Throw, 10 Amperes..each **$22.00**
No. **858**, Single-Pole Single Throw, 4 Amperes..each **20.50**

Available single-pole double throw in 4-ampere type only at $2.50 addition to list.

Mercoid Limit Controls
No. 848 A & B Controls



Designed to automatically open and close an electric circuit with a change in pressure or vacuum on steam, air, gas, water and other liquids that will not attack brass. Used for boiler control with automatic heating equipment also for pressure control on refrigerants other than ammonia.

Particularly adapted to conditions that require close differential. Model B-6 provides an unusual combination of long range, high pressure and yet close control at any point in the range.

Single-pole, single throw.

	10 Amps.	4 Amps.
Model A-1, for Press. from 1–15 Lbs....each	$29.00	$27.50
Model B-1, for Press. from 10–60 Lbs...each	30.00	28.50
Model B-4, for Press. from 25–100 Lbs...each	35.00	33.50
Model B-6, for Press. from 0–200 or 50–250 Lbs.....ea.	40.00	38.50

Available in other ranges for either vacuum or pressure.

No. 35 Risertherm

Designed for temperature control by surface contact on risers of hot water systems or on hot water tanks. Widely used with automatic heating equipment. Easily mounted on either vertical or horizontal pipe or tank.

Standard range is from 110° to 220° F. with an approximate operating differential from 6° to 25° F., depending upon the size of pipe and the operating conditions of the installation.

No. 34 is identical with No. 35 except that the Mercoid Switch is in reverse position and the range is from 140° to 230° F. It is used in connection with a thermostat for dual control of unit heaters to prevent operation of the fan until the coils are heated.

Single-pole, single throw.

	10 Amps.	4 Amps.
No. 35, 110°–200° for Heating.....each	$16.00	$14.50
No. 34, 140°–230° for Unit Heaters.....each	17.00	15.50

No. 36 Boiler Control

Immersion type controls have proven to be the correct type of limiting device for control of automatic heating equipment on hot water boiler installations.

There is no lag in the operation of these controls. Back angle type is also available.

Range No. 1, 105° to 160°, differential approximately 20°. Range No. 2, 140° to 214°, differential approximately 20°.

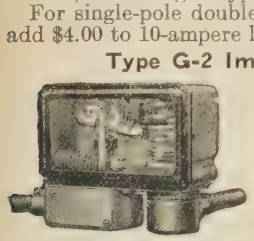
Range No. 3, 200° to 226°, differential approximately 13°.

Single-pole, single throw.

	10 Amps.	4 Amps.
No. 36, Ranges Nos. 1 and 2.....each	$18.00	$16.50
No. 37, Back Angle Type, Ranges 1 and 2...	20.00	18.50
No. 37, Back Angle Type, Range No. 3..each	22.00	20.50

For single-pole double throw or double-pole single throw add $4.00 to 10-ampere list and $2.50 to 4-ampere list.

Type G-2 Immersion Boiler Control



Designed for close regulation of electric equipment from slight changes of temperature in any liquids such as water, steam, or oil. Not injurious to brass. Recommended for control of domestic hot water storage tanks. Double adjustments provided for setting both range and differential.

Type G-1 has straight bottom connection.

Unless otherwise specified, instruments furnished single-pole, 10-ampere rating, to cut-out on rising temperature.

Standard range, 110° to 220°. Other ranges, 15° to 110°, 30° to 135°, 70° to 180°, and 155° to 245°.

Single-pole single throw.

	10 Amps.	4 Amps.
No. G-1, All Ranges.....each	$32.00	$30.50
No. G-2, All Ranges.....each	34.00	32.50

For single-pole double throw or double-pole single throw, add $4.00 to 10-ampere list and $2.50 to 4-ampere list.

Mercoid Limit Controls

Warm Air Furnace Control

No. M-51 is used to protect warm air furnaces from overheating where automatic heating equipment is used. No. M-53 is to control fans or blowers to prevent operation unless the furnace is warm enough to deliver heat.

These controls are operated by a bi-metal coil projecting within the furnace hood. Adjustable mounting flange and a graduated temperature dial is provided.

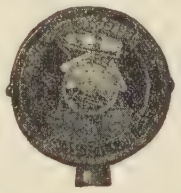
Also furnished with long bi-metal stems for bake-ovens and industrial applications where close regulation is desired.

Single-pole single throw.

	10 Amps.	4 Amps.
No. M-51, Limit Control, 50°–650° F ....each	$16.00	$14.50
No. M-53, Fan Control, 50°–650° F.....each	16.00	14.50
No. M-55, Temperature Control, 40°–280° F..	18.00	16.50

For single-pole double throw or double-pole single throw, add $4.00 to 10-ampere list and $2.50 to 4-ampere list.

Type M-61 Stoker Control



This control is generally used to fire the stoker intermittently during the period the room thermostat is in the off position, but may be used to limit the maximum temperature, or stop the stoker if the fire dies out.

The graduated dial clearly indicates the stack temperature. A simple double adjustment is provided for setting both the cut-in and cut-out temperatures. Available with stainless steel well to protect the bi-metal operating coil.

Single-pole single throw for 50°–650°. Furnished with mounting flange and steel well, 10-ampere rating unless otherwise specified.

	10 Amps.	4 Amps.
No. M-61, with Plain Flange, no Well...each	$16.00	$14.50
No. M-61, Improved Flange, Steel Well.each	20.00	18.50

No. 46 Lever Arm Control

Has numerous applications where it is desired to mechanically open and close electric circuits.

Standard control has a brass arm extending 4½ inches to right for making mechanical connections. Can be furnished with arm extending to left and with longer or shorter arms when so specified. Furnished also for top or bottom mounting.

A 3-position High-Low indicator lever arm control as well as float operated control is also available.

Single-pole single throw.

	10 Amps.	4 Amps
No. 46, Snap Action Lever Type.....each	$10.00	$8.50

For single-pole double throw or double-pole single throw, add $4.00 to 10-ampere list and $2.50 to 4-ampere list.

No. 40 Float Control

Designed for maintaining fluid levels, or automatically controlling the operation of sump pumps or cellar drainers.

Suitable for any liquid that will not deteriorate brass or solder.

Furnished standard with 4-foot rod and 2 floats, requiring 1⅝-inch travel to operate, however, adjustable stops on rod permit wider operation.

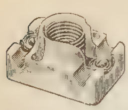
Where longer rod is required the proper number of floats and counterweights necessary for operation can be furnished at extra charge.

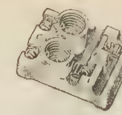
Single pole, single throw.

	10 Amps.	4 Amps.
No. 40, Arm and Float Type.....each	$22.00	20.50

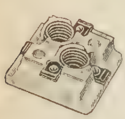
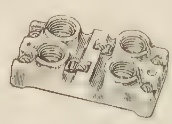
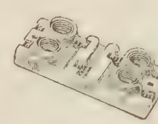
Other lever arm and float controls available.

Hemco Plug Fuse Cutouts

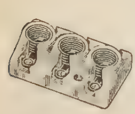
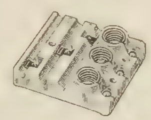
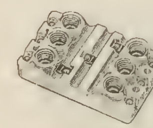

No. H110

No. H220

No. H221

Cat. No.	Per 100	Description	Carton	Std. Pkg.	Pkg, Wt.. Lbs.
H110	$20.22	Single Pole, Main Line...	10	100	21
H220	26.94	2-Pole Main Line........	10	100	58
H221	29.48	2-Pole Single Branch....	5	50	42


No. H224

No. H222

No. H232

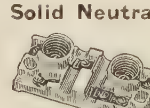
H224	$30.32	2-Pole Single or Double Crossover Branch.....	5	50	49
H222	52.22	2-Pole Double Branch...	5	50	62
H232	57.26	Triple to Double-Pole Double Branch........	5	50	76


No. H330

No. H331

No. H332

H330	$46.32	3-Pole Main Line........	5	50	50
H331	58.94	3-Pole Single Branch....	5	50	87
H332	79.16	3-Pole Double Branch...	5	50	118

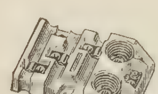
With Solid Neutral

No. H120

No. H121

No. H122

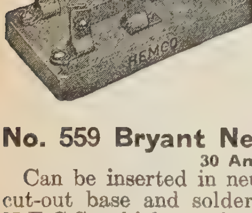
No. H132

H120	$26.94	2-Pole Main Line........	10	150	64
H121	29.48	2-Pole Single Branch....	10	100	62
H122	52.22	2-Pole Double Branch...	5	50	46
H132	57.26	Triple to Double-Pole Double Branch........	5	50	57

No. H133

No. H131

No. H134

H133	$46.32	3-Pole Main Line...	5	50	42
H131	58.94	3-Pole Single Branch or 2-Circuit..............	5	25	30
H134	109.48	3-Pole Double Branch or 4-Circuit..............	5	25	42



Hemco Entrance Switches

Fuses at Top

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt. Lbs
H1695	$63.16	1	25	38

Fuses at Bottom

Cat. No.	Per 100	Carton	Std. Pkg.	Pkg. Wt. Lbs
H1981	$63.16	1	25	37

No. 559 Bryant Neutral Wire Fuseless Plugs

30 Amperes, 125 Volts

Can be inserted in neutral fuse receptacle of triple-pole cut-out base and soldered in place. This complies with N.E.C.S. which requires omission of fuses from grounded side of line except at cut-out base just preceding the lamp socket or other translating device.

Cat. No.	Per 100	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
559	$7.08	75	300	10

Bryant Pyrotite Enclosed Plug Fuses

125 Volts

With Clear Hexagonal Mica Window in Cap

No. POR-15

Cat. No.	Per 100	Amperes	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
POR- 3	$4.80	3	50	500	35
POR- 6	4.80	6	50	500	35
POR-10	4.80	10	50	500	35
POR-15	4.80	15	50	500	35

With Clear Round Mica Window in Cap

No. POR-20

Cat. No.	Per 100	Amperes	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
POR-20	$4.80	20	50	500	35
POR-25	4.80	25	50	500	35
POR-30	4.80	30	50	500	35

Hemco Glass Plug Fuses

No. PYX30

Branch Circuit, 125 Volts

Cat. No.	Per 100	Amps.	Carton	Std. Pkg.	Pkg. Wt., Lbs.
PYX10	$4.80	10	50	500	35
PYX15	4.80	15	50	500	35

Main Circuit, 125 Volts

Cat. No.	Per 100	Amps.	Carton	Std. Pkg.	Pkg. Wt., Lbs.
PYX20	$4.80	20	50	500	35
PYX25	4.80	25	50	500	35
PYX30	4.80	30	50	500	35

Glass plug fuses will be packed in display cartons of 5 when so specified.

Jefferson Plug Fuses

The Jefferson Plug Fuse is made with a porcelain Safety Insulator Top, porcelain being one of the best insulators. Thus, user may replace the fuse with perfect safety.

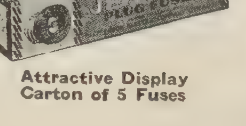
The top of the Jefferson Plug Fuse has a cutout which is filled with clear mica and the specially formed fuse element makes it possible to see at a glance whether the fuse is blown.

Hexagonal Opening

No.	Each	Amp	Carton	Wt. Lbs. (50)
388–003	$.07	3	50	3
388–005	.07	5	50	3
388–006	.07	6	50	3
388–008	.07	8	50	3
388–010	.05	10	50	3
388–015	.05	15	50	3

Round Opening

No.	Each	Amp	Carton	Wt. Lbs. (50)
388–020	$.05	20	50	3
388–025	.05	25	50	3
388–030	.05	30	50	3



Attractive Display Carton of 5 Fuses

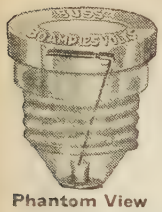
Hexagonal Opening

No.	Each	Amp.	Carton 20 Pkgs.	Wt. Lbs. (100)
388–103	$.07	3	100	5¾
388–105	.07	5	100	5¾
388–106	.07	6	100	5¾
388–108	.07	8	100	5¾
388–110	.05	10	100	5¾
388–115	.05	15	100	5¾

Round Opening

No.	Each	Amp.	Carton 20 Pkgs.	Wt. Lbs. (100)
388–120	$.05	20	100	5¾
388–125	.05	25	100	5¾
388–130	.05	30	100	5¾

Buss Clear Window Plug Fuses



Phantom View

Entire strip can be seen through extra large window, against pure white background, indicating when a Buss Fuse has blown.

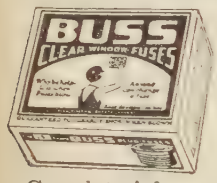
Solid one-piece body, sealed gas tight. Prevents danger of fire and property damage.

Buss Fuses always make good contact in the cutout. Excessive heating and needless blowing of fuses are avoided.

No.	*810	815	820	825	830
Amperes	10	15	20	25	30
Each	$.07	.07	.07	.07	.07

Standard package 100. Weight, 65 lbs. per 100.

*Except for instrument protection, Fusetrons should be used instead of small size fuses, as they give true and complete protection while their remarkable time-lag prevents useless blows from starting currents, etc.



Buss Fuses are packed five in a handy box that provides extra fuses when needed. Information printed on box tells user what to do when a fuse blows.

Special merchandising stand furnished free with order for 200 fuses.

Complete information on application.

Buss Fusetrons

A Fusetron is a thermal cutout to which a fuse is added. Protects motor as well as circuit wiring.

The Fusetron is a simple, inexpensive device that will give complete electrical protection. It will actually protect small motors against overload and at the same time give protection against short circuits.

Overloads on the motor as low as 25 per cent, if continued, will cause the thermal cutout in the Fusetron to open the circuit.

Will not blow on starting currents because the fuse element used is large enough to carry these currents.

Fusetrons are made to standard fuse dimensions, just pull out the fuses and put in Fusetrons.

Size to Use

See name plate of motor or device for amperes. Under ordinary conditions the ampere rating of the Fusetron should be the same or the nearest higher rating. On electric refrigerators the size must be at least 20 per cent greater than the ampere rating of the motor.

125 Volts

Fits standard plug fuse blocks.

This Fusetron is ⅛ inch higher than Buss plug fuses.

Each..... $.15

No.	704	7045	705	7056	7062	708	710
Amp	4.	4.5	5.	5.6	6.25	8.	10.

250 and 600 Volts

Fits standard cartridge fuse blocks.

250 Volt, 9/16x2 inch						each	$.20
600 Volt, 13/16x5 inch,						each	.50
No. 250 Volts	4025	4032	404	405	4062	408	410
No. 600 Volts	6025	6032	604	605	6062	608	610
Amp	2.5	3.2	4.	5.	6.25	8.	10.

Other sizes can be obtained at the same prices. 125 volts from 1/10 to 30 amperes; 250 volts from 1/10 to 15 amperes; 600 volts from 1/10 to 10 amperes.

Clearsite Non-Renewable Plug Fuses

Clearsite Plug Fuses mount the fuse link under the fuse window thereby giving clear vision of the link. The drop-out type of link is used which lessens the internal operating pressure.

The fuse body is made of heat-resisting molded insulation, black in color.

Standard Sizes

Regular Packages				Retail Packages				
Cat. No.	Each	Cap. Amps.	Carton	Cat. No.	Each	Cap. Amps.	Ret. Pkg.	*Carton
4310	$.07	10	50	5710	$.07	10	5	100
4315	.07	15	50	5715	.07	15	5	100
4320	.07	20	50	5720	.07	20	5	100
4325	.07	25	50	5725	.07	25	5	100
4330	.07	30	50	5730	.07	30	5	100

Sub-Standard Sizes

4303	$.07	3	50	5703	$.07	3	5	100
4305	.07	5	50	5705	.07	5	5	100
4306	.07	6	50	5706	.07	6	5	100
4308	.07	8	50	5708	.07	8	5	100

*Carton contains 20 retail packages of 5 fuses each.

Economy Renewable Plug Fuses

Packed 10 in carton; wt. 1¼ lbs.

Standard Sizes		Sub-Standard Sizes	
Cat. No.	Capacity Amperes	Cat. No.	Capacity Amperes
PF1068	10	PF368	3
PF1568	15	PF568	5
PF2068	20	PF668	6
PF2568	25	PF868	8
PF3068	30	.....	..

Each..... $.25

Drop Out Renewal Links

Packed 100 in carton; wt. 2 ounces.

Standard Sizes		Sub-Standard Sizes	
Cat. No.	Capacity Amperes	Cat. No.	Capacity Amperes
PR6810	10	PR6803	3
PR6815	15	PR6805	5
PR6820	20	PR6806	6
PR6825	25	PR6808	8
PR6830	30	.....	.

Each..... $.02

D & W Plug Fuse Casings

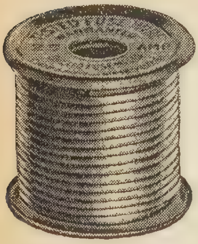
1-60 Amperes, 125 Volts

Schedule F—Class 3

For use with N. E. C. S. type fuses.

Cat. No.	Cap. Amps.	Carton	Std. Pkg.	Price Each
190	1–30	10	100	$.22
191	31–60	10	100	.43

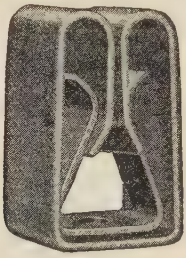
Tested Fuse Wire



Fuse wire is carefully wound on spools having heavy flanges which effectually protect the soft fusible metal from abrasion or other mechanical injury; these are then placed in small cans that are properly labeled and sealed, so that fuse wire may be stored away for an indefinite time without depreciation in quality or appearance.

Safe Carrying Cap. Amps.	Per Lb.	Best Length for Use and Fusing Currents for Such Lengths Inches	Amperes	Length Feet per Lb.	Diam. Inches	One Pkg. Contains No. of Spools	Size Spools
1/4	$100.00	1	3/4	12920	.0045	1	250 Ft.
1/2	10.00	1	1 3/4	2616	.010	2	4 Oz.
1	4.00	1 1/4	3 1/4	1021	.016	2	8 Oz.
2	3.50	1 1/2	5 1/2	419	.025	2	8 Oz.
3	3.00	1 1/2	7 1/2	273	.031	2	8 Oz.
5	2.25	1 3/4	10	172	.039	1	1 Lb.
6	2.25	2	11	148	.042	1	1 Lb.
10	2.00	2 1/4	16	87	.055	1	1 Lb.
15	2.00	2 1/4	22	57	.068	1	1 Lb.
20	1.50	2 1/2	28	39	.082	1	1 Lb.
25	1.50	2 3/4	34	29 3/4	.094	1	1 Lb.
30	1.50	2 3/4	40	24 3/4	.103	1	1 Lb.
40	1.50	3	48	17 1/2	.122	1	1 Lb.
50	1.50	3	59	14	.137	1	1 Lb.
60	1.50	3 1/4	70	10 1/2	.158	1	5 Lb.
70	1.50	3 1/4	78	9	.170	1	5 Lb.
75	1.50	3 1/2	85	8	.182	1	5 Lb.
80	1.50	3 1/2	92	7 1/4	.189	1	5 Lb.
90	1.50	3 1/2	108	5 3/4	.212	1	5 Lb.
100	1.50	4	114	5	.226	1	5 Lb.

Square D Positive Pressure Fuse Clips



250 Volts

Cat. No.	Per 100 Std. Pkg.	Per 100 Less Std. Pkg.	Amps.	Type	Std. Pkg.
*SK-2370	$10.40	$12.40	30	Clip	200
SK-2371	10.40	12.40	30	Clip	200
SK-2372	13.60	16.20	60	Clip	75
†SK-2363	47.00	56.00	100	Jaw	40
†SK-2364	99.00	119.00	200	Jaw	20
†SK-2365	240.00	288.00	400	Jaw	10
†SK-2366	410.00	500.00	600	Jaw	4
600 Volts					
SK-2361	$13.00	$15.60	30	Clip	100
SK-2362	16.80	20.00	60	Clip	50
†SK-2363	47.00	56.00	100	Jaw	40
†SK-2364	99.00	119.00	200	Jaw	20
†SK-2365	240.00	288.00	400	Jaw	10
†SK-2366	410.00	500.00	600	Jaw	4

*For lighting panels only.
†Pressure springs included but not assembled to clip.

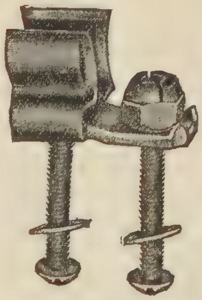
Steel Reinforcing Springs Only

To Convert Multi-Spring Jaws to Positive Pressure Type

SK-2373	$20.00	$24.00	100	....	20
SK-2374	40.00	48.00	200	....	10
SK-2375	80.00	96.00	400	....	4
SK-2376	120.00	144.00	600	....	2

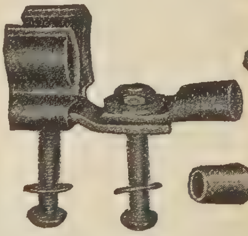
FA Fuse Terminals

250 and 600 Volts



Type F 3 to 30 Amperes

Type B 3 to 30 Amperes



Type F 31 to 60 Amperes

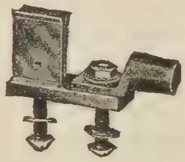
Type B 31 to 60 Amperes

Front Connection

Cat. No.	Ampere Capacity	Volts	Price, Each Plain Finish	Satin Finish
F 33	30	250	$.40	$.32
F 63	60	250	.60	.48
F 36	30	600	.78	.62
F 66	60	600	.95	.76
F103	100	250 and 600	1.05	.84
F203	200	250 and 600	1.63	1.30

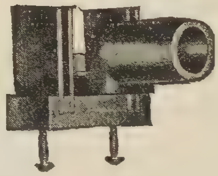
Back Connection

Cat. No.	Ampere Capacity	Volts	Plain Finish	Satin Finish
B 33	30	250	$.88	$.70
B 63	60	250	1.30	1.04
B 36	30	600	1.33	1.10
B 66	60	600	1.58	1.26
B103	100	250 and 600	2.70	2.24
B203	200	250 and 600	4.20	3.36

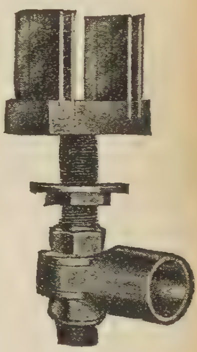


Type A 401 to 600 Amperes

Type B 61 to 600 Amperes



Type A 601 to 1200 Amperes



Type B 601 to 1200 Amperes

Front Connection

Cat. No.	Ampere Capacity	Volts	Price, Each Plain Finish	Satin Finish
A 403	400	250 and 600	$5.83	$4.66
A 603	600	250 and 600	9.13	7.30
A 803	800	250 and 600	15.63	12.50
A1003	1200	250 and 600	23.03	18.42

Back Connection

Cat. No.	Ampere Capacity	Volts	Plain Finish	Satin Finish
B 403	400	250 and 600	$8.50	$6.80
B 603	600	250 and 600	13.63	10.10
B 803	800	250 and 600	28.00	22.40
B1003	1200	250 and 600	38.13	30.50

Front connection fuse terminals are furnished with short screws, requiring head to be countersunk.

Back connection fuse terminals are furnished with studs long enough for 2-inch slate or marble mounting.

NOTE.—Satin finish will be sent unless otherwise specified.

FA Standard Fuse Blocks

For N. E. C. Cartridge Type Fuses

Front Connection—Plain Finish

On Dead Black Finish Bases

SINGLE-POLE

250 Volts, D.C. or A.C.

Cat. No.	Capacity Amperes	Price Each
F 331	30	$1.20
F 631	60	1.80
F 1031	100	2.50
F 2031	200	3.60
A 4031	400	10.10
A 6031	600	15.30
A 8031	800	24.60
A10031	1000	35.80

600 Volts, D.C. or A.C.

F 361	30	$1.60
F 661	60	2.20
F 1061	100	2.50
F 2061	200	3.80
A 4061	400	10.30
A 6061	600	16.50

DOUBLE-POLE

250 Volts, D.C. or A.C.

Cat. No.	Capacity Amperes	Price Each
F 332	30	$1.70
F 632	60	2.80
F 1032	100	3.60
F 2032	200	5.80
A 4032	400	18.60
A 6032	600	28.90
A 8032	800	48.20
A10032	1000	70.70

600 Volts, D.C. or A.C.

F 362	30	$2.50
F 662	60	3.60
F 1062	100	4.00
F 2062	200	6.60
A 4062	400	19.40
A 6062	600	31.40

3-POLE

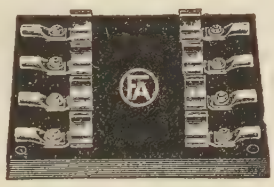
250 Volts, D.C. or A.C.

Cat. No.	Capacity Amperes	Price Each
F 333	30	$2.20
F 633	60	3.80
F 1033	100	5.20
F 2033	200	8.70
A 4033	400	28.20
A 6033	600	43.90
A 8033	800	71.50
A10033	1000	105.10

600 Volts, D.C. or A.C.

F 363	30	$3.90
F 663	60	5.50
F 1063	100	6.20
F 2063	200	10.10
A 4063	400	29.40
A 6063	600	46.50

4-POLE



250 Volts, D.C. or A.C.

Cat. No.	Capacity Amperes	Price Each
F 334	30	$3.70
F 634	60	4.90
F 1034	100	6.90
F 2034	200	12.00
A 4034	400	37.70
A 6034	600	58.20
A 8034	800	94.00
A10034	1000	141.00

600 Volts, D.C. or A.C.

F 364	30	$4.80
F 664	60	8.70
F 1064	100	9.50
F 2064	200	14.40
A 4064	400	39.60
A 6064	600	63.70

The 30 and 60-ampere fuse blocks have ferrule type clips.

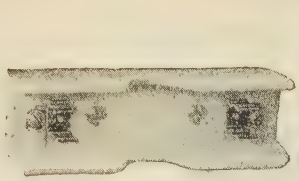
The 100 and 200-ampere fuse blocks have formed clips.

The 400 and 600-ampere fuse blocks have milled in clips.

Fuse blocks over 600 amperes are made with multiple milled parts for each pole.

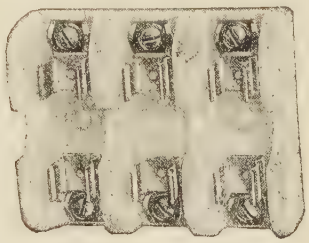
D & W Enclosed Fuse Cutouts

Schedule FC—Class 1



Nos. 91098 and 91107—Single Pole

Nos. 91104 and 91110—Double Pole



Nos. 91103 and 91109 Triple Pole

0-600 Amperes—250 Volts

Ferrule Contact, Porcelain Base

Cat. No.	Each	Cap. Amps.	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
91101	$.34	0–30	Single-Pole, Main Line	5	50	13
91098	.34	0–30	Single-Pole, Main Line with Barriers	5	50	37
91102	.46	0–30	Double-Pole Main Line	5	50	37
91103	.67	0–30	Triple-pole Main Line	5	50	51
91104	.59	0–30	Double-Pole Sgl. Br.	5	50	60
91105	1.14	0–30	Triple-Pole Sgl. Br.	1	50	90
91106	1.09	0–30	Double-Pole Dbl. Br.	1	25	50
91100	1.89	0–30	Triple-Pole Dbl. Br.	1	25	91
91121	1.26	0–30	3 to 2-Wire, Dbl. Br.	1	25	65
91107	.55	31–60	Single-Pole Main Line	5	50	30
91108	1.18	31–60	Double-Pole, Main Line	1	50	81
91109	1.68	31–60	Triple-Pole, Main Line	1	50	117
91110	1.47	31–60	Double-Pole, Sgl. Br.	1	50	121
91111	2.53	31–60	Triple-Pole, Sgl. Br.	1	25	250
91113	2.95	31–60	Double-Pole, Dbl. Br.	1	25	134
91123	5.05	31–60	Triple-Pole, Dbl. Br.	1	10	95
91124	3.54	31–60	3 to 2-Wire, Dbl. Br.	1	25	158
Knife Blade Contact, Porcelain Base						
91114	$1.18	61–100	Single-Pole, Main Line	1	50	79
91119	2.36	61–100	Double-Pole, Main Line	1	50	156
91120	3.37	61–100	Triple-Pole, Main Line	1	25	117
Knife Blade Contact, Slate Base						
91115	$2.10	101–200	Single-Pole, Main Line	1	25	84
91117	5.25	201–400	Single-Pole, Main Line	1	10	138
91118	7.20	401–600	Single-Pole, Main Line	1	5	93

0-600 Amperes—600 Volts

Nos. 28079, 28080 and 28081

Ferrule Contact, Porcelain Base

Cat. No.	Each	Cap. Amp.	Description	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
28074	$.51	0–30	Single-Pole, with Barriers	5	50	70
28075	.75	31–60	Single-Pole, with Barriers	1	50	140
28076	.48	0–30	Single-Pole	5	50	48
28077	.72	31–60	Single-Pole	5	50	54
Knife Blade Contact, Porcelain Base						
28078	$1.47	61–100	Single-Pole	1	50	102
Knife Blade Contact, Slate Base						
28079	$2.30	101–200	Single-Pole	1	25	106
28080	6.00	201–400	Single-Pole	1	10	181
28081	7.80	401–600	Single-Pole	1	15	108

D & W Enclosed Fuses

250 Volts

Schedule F—Class 1

Ferrule Contact, 1-60 Amperes

Carton quantity, 10; standard package, 100.

Cap. Amps.	Wt, Lbs. Std. Pkg.	Non-Indicating Cat. No.	Non-Indicating Per 100	Indicating Cat. No.	Indicating Per 100
1	..	91001	$8.10	.....	.....
3	4	DW1454	8.10	91125	$9.00
6	4	DW1457	8.10	91128	9.00
10	4	DW1461	8.10	91133	9.00
15	4	DW1463	8.10	91135	9.00
20	4	DW1464	8.10	91136	9.00
25	4	DW1465	8.10	91137	9.00
30	4	DW1466	8.10	91138	9.00
35	11	DW1467	16.20	91139	18.00
40	11	DW1468	16.20	91140	18.00
45	11	DW1469	16.20	91141	18.00
50	11	DW1470	16.20	91143	18.00
60	11	DW1472	16.20	91147	18.00

Knife Blade Contact, 61-600 Amperes

Carton quantity: 65 to 100 amperes, 5—100 to 600 amperes, 1.

Standard package: 65 to 100 amperes, 50—110 to 220 amperes, 25—225 to 400 amperes, 10—450 to 600 amperes, 5.

Cap. Amps.	Wt, Lbs. Std. Pkg.	Non-Indicating Cat. No.	Non-Indicating Per 100	Indicating Cat. No.	Indicating Per 100
70	16	DW1474	$48.60	.....	.....
80	16	DW1476	48.60	91152	$54.00
90	16	DW1477	48.60	.....	.....
100	16	DW1478	48.60	91156	54.00
110	22	DW1479	108.00	.....	.....
125	22	DW2628	108.00	.....	.....
150	22	DW1483	108.00	91162	120.00
175	22	DW2629	108.00	.....	.....
200	22	DW1488	108.00	91164	120.00
225	11	DW1489	194.40	91165	216.00
250	11	DW1490	194.40	91166	216.00
300	11	DW1492	.....	91168	216.00
350	11	DW1494	194.40	91170	216.00
400	11	DW1496	194.40	91172	216.00
450	14	DW1498	297.00	.....	.....
500	14	DW1500	297.00	91174	330.00
600	14	DW1504	297.00	91176	330.00

Refills for Enclosed Fuses

Amperes	65–100	110–200	225–400	450 600
Non-Indicating per 100	$22.96	$51.00	$91.80	$140.26
Indicating.....per 100	27.54	61.20	110.16	168.30

An addition of $5.00 list per size (ampere rating) per shipment should be added to these prices regardless of quantity.

D & W Enclosed Fuses

600 Volts

Schedule F—Class 1

Ferrule Contact, 1-60 Amperes

Carton quantity, 10; standard package, 100.

Cap. Amps.	Wt. Lbs. Std. Pkg.	Non-Indicating Cat. No.	Non-Indicating Per 100	Indicating Cat. No.	Indicating Per 100
1	..	28082	$27.00	.....	.....
3	14	DW1505	27.00	28084	$30.00
6	14	DW1508	27.00	28087	30.00
10	14	DW1512	27.00	28091	30.00
15	14	DW1514	27.00	28093	30.00
20	14	DW1515	27.00	28094	30.00
25	14	DW1516	27.00	28095	30.00
30	14	DW1517	27.00	28096	30.00
35	25	DW1518	43.20	28097	48.00
40	25	DW1519	43.20	28098	48.00
45	25	DW1520	43.20	28099	48.00
50	25	DW1521	43.20	28100	48.00
60	25	DW1523	43.20	28102	48.00

Knife Blade Contact, 61-600 Amperes

Carton quantity, 65 to 100 amperes, 5; 110 to 600 amperes, 1. Standard package, 65 to 100 amperes, 50—110 to 200 amperes, 25—225 to 400 amperes, 10; 450 to 600 amperes, 5.

Cap. Amps.	Wt. Lbs. Std. Pkg.	Non-Indicating Cat. No.	Non-Indicating Per 100	Indicating Cat. No.	Indicating Per 100
70	27	DW1525	$97.20	.....	.....
80	27	DW1527	97.20	.....	.....
90	27	DW1528	97.20	.....	.....
100	27	DW1529	97.20	28110	108.00
110	34	DW1530	189.00	.....	.....
125	34	DW2631	189.00	.....	.....
150	34	DW1534	189.00	28114	210.00
175	34	DW2632	189.00	.....	.....
200	34	DW1539	189.00	28116	210.00
225	31	DW1540	378.00	.....	.....
250	31	DW1541	378.00	28118	420.00
300	31	DW1543	378.00	28120	420.00
350	31	DW1545	378.00	.....	.....
400	31	DW1547	378.00	28124	420.00
450	25	DW1549	540.00	.....	.....
500	25	DW1551	540.00	28126	600.00
600	25	DW1555	540.00	28128	600.00

Refills For Enclosed Fuses

Amperes	65–100	110–200	225–400	450–600
Non-Indicating per 100	$45.90	$89.26	$178.50	$255.00
Indicating.....per 100	55.08	107.10	214.20	306.00

An addition of $5.00 list per size (ampere rating) per shipment should be added to these prices regardless of quantity.

Economy Renewable Cartridge Fuses

250 and 600 Volts

Economy Fuses always operate at rated capacities. The drop out renewal link is quickly and easily replaced and the restoration of a blown Economy Fuse to its original efficiency is the work of a few moments only.

These fuses operate successfully under all conditions of service without filling material of any description. Fuses bear the "Und. Inspected" label in all capacities from 0 to 600 amperes in both 250 and 600 volts.

Complete Fuses—Ferrule Type—1 to 60 Amperes

Amperes	Carton	250 Volts Cat. No.	250 Volts Wt., Lbs. per Carton	250 Volts Each	600 Volts Cat. No.	600 Volts Wt., Lbs. per Carton	600 Volts Each
3	10	F- 325	5/8	$.40	F- 305	1 5/8	$1.00
6	10	F- 625	5/8	.40	F- 605	1 5/8	1.00
10	10	F-1025	5/8	.40	F-1005	1 5/8	1.00
15	10	F-1525	5/8	.40	F-1505	1 5/8	1.00
20	10	F-2025	5/8	.40	F-2005	1 5/8	1.00
25	10	F-2525	5/8	.40	F-2505	1 5/8	1.00
30	10	F-3025	5/8	.40	F-3005	1 5/8	1.00
35	10	F-3525	1 3/8	.80	F-3505	3 3/8	1.60
40	10	F-4025	1 3/8	.80	F-4005	3 3/8	1.60
45	10	F-4525	1 3/8	.80	F-4505	3 3/8	1.60
50	10	F-5025	1 3/8	.80	F-5005	3 3/8	1.60
60	10	F-6025	1 3/8	.80	F-6005	3 3/8	1.60

Dimensions

Amperes	250 Volts Length Inches	250 Volts Diameter Inches	600 Volts Length Inches	600 Volts Diameter Inches
1–30	2	9/16	5	13/16
35–60	3	13/16	5 1/2	1 1/16

Complete Fuses—Knife Blade Type—61 to 600 Amperes

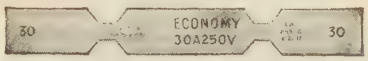
Amperes	Carton	250 Volts Cat. No.	250 Volts Wt., Lbs. per Carton	250 Volts Each	600 Volts Cat. No.	600 Volts Wt., Lbs. per Carton	600 Volts Each
70	5	F- 7025	2	$1.80	F- 7005	3 3/8	$3.60
80	5	F- 8025	2	1.80	F- 8005	3 3/8	3.60
90	5	F- 9025	2	1.80	F- 9005	3 3/8	3.60
100	5	F-10025	2	1.80	F-10005	3 3/8	3.60
110	1	F-11025	1 1/16	4.00	F-11005	1 3/4	7.00
125	1	F-12525	1 1/16	4.00	F-12505	1 3/4	7.00
150	1	F-15025	1 1/16	4.00	F-15005	1 3/4	7.00
175	1	F-17525	1 1/16	4.00	F-17505	1 3/4	7.00
200	1	F-20025	1 1/16	4.00	F-20005	1 3/4	7.00
225	1	F-22525	2 1/8	7.20	F-22505	3 3/8	14.00
250	1	F-25025	2 1/8	7.20	F-25005	3 3/8	14.00
300	1	F-30025	2 1/8	7.20	F-30005	3 3/8	14.00
350	1	F-35025	2 1/8	7.20	F-35005	3 3/8	14.00
400	1	F-40025	2 1/8	7.20	F-40005	3 3/8	14.00
450	1	F-45025	3 1/2	11.00	F-45005	5 1/2	20.00
500	1	F-50025	3 1/2	11.00	F-50005	5 1/2	20.00
600	1	F-60025	3 1/2	11.00	F-60005	5 1/2	20.00

Dimensions

Amperes	250 Volts Length Inches	250 Volts Blade Width Inches	600 Volts Length Inches	600 Volts Blade Width Inches
61–100	5 7/8	3/4	7 7/8	3/4
110–200	7 1/8	1 1/8	9 5/8	1 1/8
225–400	8 5/8	1 5/8	11 5/8	1 5/8
450–600	10 3/8	2	13 3/8	2

Economy Renewal Links

Ferrule Type—1 to 60 Amperes



250 Volts

Cat. No.	Each	Amperes	Carton	Wt. Lbs. per Carton
R-203	$.02	3	100	3/16
R-206	.02	6	100	3/16
R-210	.02	10	100	3/16
R-215	.02	15	100	3/16
R-220	.02	20	100	3/16
R-225	.02	25	100	3/16
R-230	.02	30	100	3/16
R-235	.04	35	100	5/8
R-240	.04	40	100	5/8
R-245	.04	45	100	5/8
R-250	.04	50	100	5/8
R-260	.04	60	100	5/8

600 Volts

R-603	$.05	3	100	9/16
R-606	.05	6	100	9/16
R-610	.05	10	100	9/16
R-615	.05	15	100	9/16
R-620	.05	20	100	9/16
R-625	.05	25	100	9/16
R-630	.05	30	100	9/16
R-635	.08	35	100	1 9/16
R-640	.08	40	100	1 9/16
R-645	.08	45	100	1 9/16
R-650	.08	50	100	1 9/16
R-660	.08	60	100	1 9/16

Knife Blade Type—61 to 600 Amperes

250 Volts

R- 270	$.09	70	50	3/8
R- 280	.09	80	50	3/8
R- 290	.09	90	50	3/8
R-2100	.09	100	50	3/8
R-2110	.20	110	25	7/16
R-2125	.20	125	25	7/16
R-2150	.20	150	25	7/16
R-2175	.20	175	25	7/16
R-2200	.20	200	25	7/16
R-2225	.36	225	25	15/16
R-2250	.36	250	25	15/16
R-2300	.36	300	25	15/16
R-2350	.36	350	25	15/16
R-2400	.36	400	25	15/16
R-2450	.55	450	10	11/16
R-2500	.55	500	10	11/16
R-2600	.55	600	10	11/16

600 Volts

R- 670	$.18	70	50	1
R- 680	.18	80	50	1
R- 690	.18	90	50	1
R-6100	.18	100	50	1
R-6110	.35	110	25	1 1/16
R-6125	.35	125	25	1 1/16
R-6150	.35	150	25	1 1/16
R-6175	.35	175	25	1 1/16
R-6200	.35	200	25	1 1/16
R-6225	.70	225	25	2 15/16
R-6250	.70	250	25	2 15/16
R-6300	.70	300	25	2 15/16
R-6350	.70	350	25	2 15/16
R-6400	.70	400	25	2 15/16
R-6450	1.00	450	10	1 7/8
R-6500	1.00	500	10	1 7/8
R-6600	1.00	600	10	1 7/8

Buss Super-Lag Renewable Fuses

250 and 600 Volts

Buss Super-Lag Fuses have a super-long time-lag.

They do not blow as often as old style fuses; will not pop open on every surge or harmless overload.

The fuses give better motor protection, make it possible to fuse nearer to the motor rating, and prevent single phasing.

Few simple parts of the Buss Fuse case make renewal quick and easy, faulty renewal is impossible.

Heating from poor contact is prevented; charring and burning of cases practically eliminated; needless blowing of fuses is avoided; and fuse bills are materially reduced.

Complete Fuses—Ferrule Type—3 to 60 Amperes

	250 Volts			600 Volts			
Amps.	Cat. No.	Each	Wt., Lbs. per 100	Cat. No.	Each	Wt., Lbs. per 100	Carton
* 3	1003	$.40	5.5	1303	$1.00	18	10
* 6	1006	.40	5.5	1306	1.00	18	10
*10	1010	.40	5.5	1310	1.00	18	10
15	1012	.40	5.5	1312	1.00	18	10
20	1013	.40	5.5	1313	1.00	18	10
25	1014	.40	5.5	1314	1.00	18	10
30	1015	.40	5.5	1315	1.00	18	10
35	1016	.80	14	1316	1.60	36	10
40	1017	.80	14	1317	1.60	36	10
45	1018	.80	14	1318	1.60	36	10
50	1019	.80	14	1319	1.60	36	10
60	1021	.80	14	1321	1.60	36	10

Complete Fuses—Knife Blade Type—70 to 600 Amperes

70	1023	$1.80	46	1323	$3.60	83	5
80	1025	1.80	46	1325	3.60	83	5
90	1027	1.80	46	1327	3.60	83	5
100	1029	1.80	46	1329	3.60	83	5
110	1030	4.00	109	1330	7.00	183	1
125	1031	4.00	109	1331	7.00	183	1
150	1032	4.00	109	1332	7.00	183	1
175	1033	4.00	109	1333	7.00	183	1
200	1034	4.00	109	1334	7.00	183	1
225	1035	7.20	266	1335	14.00	373	1
250	1036	7.20	266	1336	14.00	373	1
300	1038	7.20	266	1338	14.00	373	1
350	1040	7.20	266	1340	14.00	373	1
400	1042	7.20	266	1342	14.00	373	1
450	1043	11.00	389	1343	20.00	573	1
500	1044	11.00	389	1344	20.00	573	1
600	1046	11.00	389	1346	20.00	573	1

Dimensions, Inches

Ferrule Type

	250 Volts — Dimensions, Inches			600 Volts — Dimensions, Inches		
Amps.	Length Over All	Diam. of Tube	Diam. Over Ferrules	Length Over All	Diam. of Tube	Diam. Over Ferrules
3–30	2	1/2	9/16	5	3/4	13/16
35–60	3	3/4	13/16	5 1/2	1	1 1/16

Knife Blade Type

	Contact Blade, In.			250 Volts		600 Volts	
Amps.	Thickness	Width	Length	Lgth. Over All In.	Diam. Tube In.	Lgth. Over All In.	Diam. Tube In.
70–100	1/8	3/4	1	5 7/8	1	7 7/8	1 1/4
110–200	3/16	1 1/8	1 3/8	7 1/8	1 1/2	9 5/8	1 3/4
225–400	1/4	1 5/8	1 7/8	8 5/8	2	11 5/8	2 1/2
450–600	1/4	2	2 1/4	10 3/8	2 1/2	13 3/8	3

*Except for instrument protection, Fusetrons should be used instead of small size fuses, as they give true and complete protection while their remarkable time-lag prevents useless blows from starting currents, etc.

Buss Super-Lag Renewal Links

One-Piece Links on All Sizes

All Buss Super-Lag Renewal links are made in one piece. This insures better contact within the fuse than when several links and washers must be bolted together.

Thus needless blows due to heat from poor contact are eliminated and charring of fuse cases is avoided.

Renewal of large size fuses is made very simple, and time and trouble are saved.

Buss Super-Lag Renewal Links are of standard size, interchangeable with all standard makes of renewable fuses.

3 to 60 Amperes

	250 Volts			600 Volts			
Amps.	No.	Each	Wt., Lbs. per 100	No.	Each	Wt., Lbs. per 100	Carton
*3	1103	$.02	1/4	1403	$.05	1	100
*6	1106	.02	1/4	1406	.05	1	100
*10	1110	.02	1/4	1410	.05	1	100
15	1112	.02	1/4	1412	.05	1	100
20	1113	.02	1/4	1413	.05	1	100
25	1114	.02	1/4	1414	.05	1	100
30	1115	.02	1/4	1415	.05	1	100
35	1116	.04	1	1416	.08	3	100
40	1117	.04	1	1417	.08	3	100
45	1118	.04	1	1418	.08	3	100
50	1119	.04	1	1419	.08	3	100
60	1121	.04	1	1421	.08	3	100

70 to 300 Amperes

70	1123	.09	2	1423	.18	5.3	50
80	1125	.09	2	1425	.18	5.3	50
90	1127	.09	2	1427	.18	5.3	50
100	1129	.09	2	1429	.18	5.3	50
110	1130	.20	5	1430	.35	14.6	25
125	1131	.20	5	1431	.35	14.6	25
150	1133	.20	5	1433	.35	14.6	25
175	1135	.20	5	1435	.35	14.6	25
200	1137	.20	5	1437	.35	14.6	25
225	1138	.36	11	1438	.70	29	25
250	1139	.36	11	1439	.70	29	25
300	1141	.36	11	1441	.70	29	25

350 to 400 Amperes

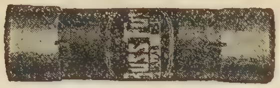
350	1143	.36	11	1443	.70	29	25
400	1145	.36	11	1445	.70	29	25

450 to 600 Amperes

450	1146	.55	16	1446	1.00	37	10
500	1147	.55	16	1447	1.00	37	10
600	1149	.55	16	1449	1.00	37	10

*Except for instrument protection, Fusetrons should be used instead of small size fuses, as they give true and complete protection while their remarkable time-lag prevents useless blows from starting currents, etc.

Buss One-Time Fuses
250 and 600 Volts



Ferrule Contact Fuse—1 to 60 Amperes

Knife Blade Contact—70 to 1000 Amperes

Buss One-Time Fuses are guaranteed, with good contact, to operate perfectly at any overload without charring or burning the fuse case.

Buss One-Time Cartridge Fuses are listed as standard by the Underwriters' Laboratories in all sizes up to and including 600 amperes. Sizes larger than 600 amperes are not tested or listed by the Underwriters and should not be used. (Use two smaller fuses in parallel.)

Ferrule Contact Fuse—1 to 60 Amperes

		250 Volts			600 Volts		
Cap. Amp.	Carton	Cat. No.	Wt., Lbs. per 100	Each	Cat. No.	Wt., Lbs. per 100	Each
*1	10	25001	3.8	$.15	60001	14.5	$.50
*3	10	25003	3.8	.15	60003	14.5	.50
*6	10	25006	3.8	.15	60006	14.5	.50
*10	10	25010	3.8	.15	60010	14.5	.50
15	10	25015	3.8	.15	60015	14.5	.50
20	10	25020	3.8	.15	60020	14.5	.50
25	10	25025	3.8	.15	60025	14.5	.50
30	10	25030	3.8	.15	60030	14.5	.50
35	10	25035	10.0	.30	60035	26.0	.80
40	10	25040	10.0	.30	60040	26.0	.80
45	10	25045	10.0	.30	60045	26.0	.80
50	10	25050	10.0	.30	60050	26.0	.80
60	10	25060	10.0	.30	60060	26.0	.80
Knife Blade Contact—70 to 1000 Amperes							
70	5	25070	32.0	$.90	60070	56.0	$1.80
80	5	25080	32.0	.90	60080	56.0	1.80
90	5	25090	32.0	.90	60090	56.0	1.80
100	5	25100	32.0	.90	60100	56.0	1.80
110	1	25110	79.0	2.00	60110	124.0	3.50
125	1	25125	79.0	2.00	60125	124.0	3.50
150	1	25150	79.0	2.00	60150	124.0	3.50
175	1	25175	79.0	2.00	60175	124.0	3.50
200	1	25200	79.0	2.00	60200	124.0	3.50
225	1	25225	165.0	3.60	60225	303.0	7.00
250	1	25250	165.0	3.60	60250	303.0	7.00
300	1	25300	165.0	3.60	60300	303.0	7.00
350	1	25350	165.0	3.60	60350	303.0	7.00
400	1	25400	165.0	3.60	60400	303.0	7.00
450	1	25450	276.0	5.50	60450	463.0	10.00
500	1	25500	276.0	5.50	60500	463.0	10.00
600	1	25600	276.0	5.50	60600	463.0	10.00
700	1	25700	430.0	12.00	60700	600.0	15.00
800	1	25800	430.0	12.00	60800	600.0	15.00
900	1	25900	540.0	15.00	60900	775.0	18.00
1000	1	26000	540.0	15.00	61000	775.0	18.00

Dimensions, Inches
Ferrule Contact Fuse

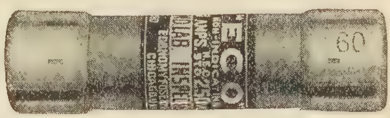
	250 Volts Dimensions			600 Volts Dimensions		
Amps.	Length Over All	Diam. of Tube	Diam. Over Ferrules	Length Over All	Diam. of Tube	Diam. Over Ferrules
1–30	2	½	9/16	5	¾	13/16
35–60	3	¾	13/16	5½	1	1 1/16

Knife Blade Contact

	Contact Blade			250 Volts		600 Volts	
Amps.	Thickness	Width	Length	Lgth. Over All	Diam. Tube	Lgth. Over All	Diam. Tube
70– 100	⅛	¾	1	5⅞	1	7⅞	1¼
110– 200	3/16	1⅛	1⅜	7⅛	1½	9⅝	1¾
225– 400	¼	1⅝	1⅞	8⅝	2	11⅝	2½
450– 600	¼	2	2¼	10⅜	2½	13⅜	3
650– 800	⅜	2⅜	2⅝	11½	3	14½	3½
850–1000	⅜	2⅝	2 15/16	12⅝	3½	15⅝	4

*Except for instrument protection, Fusetrons should be used instead of small size fuses, as they give true and complete protection while their remarkable time-lag prevents useless blows from starting currents, etc.

Eco Non-Indicating Non-Renewable Enclosed Fuses
Ferrule Type



		250 Volts		600 Volts	
Cap. Amps.	Unit Carton Quan.	Cat. No.	Each	Cat. No.	Each
1	10	1101	$.15	1601	$.50
3	10	1103	.15	1603	.50
6	10	1106	.15	1606	.50
10	10	1110	.15	1610	.50
15	10	1115	.15	1615	.50
20	10	1120	.15	1620	.50
25	10	1125	.15	1625	.50
30	10	1130	.15	1630	.50
35	10	1135	.30	1635	.80
40	10	1140	.30	1640	.80
45	10	1145	.30	1645	.80
50	10	1150	.30	1650	.80
60	10	1160	.30	1660	.80

Knife Blade Type

		250 Volts		600 Volts	
Cap. Amps.	Unit Carton Quan.	Cat. No.	Each	Cat. No.	Each
70	5	11070	$.90	16070	$1.80
80	5	11080	.90	16080	1.80
90	5	11090	.90	16090	1.80
100	5	11100	.90	16100	1.80
110	1	11110	2.00	16110	3.50
125	1	11125	2.00	16125	3.50
150	1	11150	2.00	16150	3.50
175	1	11175	2.00	16175	3.50
200	1	11200	2.00	16200	3.50
225	1	11225	3.60	16225	7.00
250	1	11250	3.60	16250	7.00
300	1	11300	3.60	16300	7.00
350	1	11350	3.60	16350	7.00
400	1	11400	3.60	16400	7.00
450	1	11450	5.50	16450	10.00
500	1	11500	5.50	16500	10.00
600	1	11600	5.50	16600	10.00

Ideal Fuse Pullers

Designed to eliminate danger of pulling and replacing cartridge fuses by hand and bending of fuse clips through improper removal. Also adapted for adjusting loose cutout clips, handling laboratory test tubes, live electrical parts, etc.

Approved as standard by safety departments of thousands of industrial plants. Made in four handy sizes.

Midget Size

For handling small fuses, grid leaks, etc., ¼ to ½ inch in diameter. Has 3 laminations, 5 inches long.

Each.. $.45

Pocket Size

A popular size for general use. For fuses 0 to 200 amperes, 250 volts and 1 to 100 amperes, 600 volts. Has 5 laminations, 7½ inches long.

Each.. $1.25

Giant Size

For fuses 100 to 600 amperes, 250 volts and 60 to 400 amperes, 600 volts. Has 7 laminations, 12 inches long.

Each.. $3.75

Jumbo Size

A large powerful tool for handling fuses 200 to 800 amperes, 250 volts and 200 to 600 amperes, 600 volts. Has 9 laminations, 20 inches long.

Each.. $11.20

Jefferson Super-Lag Renewable Enclosed Fuses

Care should be taken to insure clean contact surfaces between the copper blades, renewals and washers. The nut should always be drawn up tight.

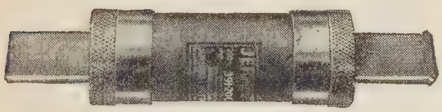
Ferrule Type

Cap. Amp.	Carton	250 Volts Cat. No.	250 Volts Per 100	250 Volts Wt., Lbs. Per 100	600 Volts Cat. No.	600 Volts Per 100	600 Volts Wt., Lbs. Per 100
3	10	391–003	$40.00	5¾	393–003	$100.00	19
6	10	391–006	40.00	5¾	393–006	100.00	19
10	10	391–010	40.00	5¾	393–010	100.00	19
15	10	391–015	40.00	5¾	393–015	100.00	19
20	10	391–020	40.00	5¾	393–020	100.00	19
25	10	391–025	40.00	5¾	393–025	100.00	19
30	10	391–030	40.00	5¾	393–030	100.00	19
35	10	391–035	80.00	14¾	393–035	160.00	37
40	10	391–040	80.00	14¾	393–040	160.00	37
45	10	391–045	80.00	14¾	393–045	160.00	37
50	10	391–050	80.00	14¾	393–050	160.00	37
60	10	391–060	80.00	14¾	393–060	160.00	37

Dimensions

Cap. Amp.	250 Volts Lgth. Over All In.	250 Volts Diam. Tube In.	250 Volts Diam. Ferrule In.	600 Volts Lgth. Over All In.	600 Volts Diam. Tube In.	600 Volts Diam. Ferrule In.
3–30	2	½	9/16	5	¾	13/16
35–60	3	¾	13/16	5½	1	1 1/16

Knife Blade Type



Cap. Amp.	Carton	250 Volts Cat. No.	250 Volts Per 100	250 Volts Wt., Lbs. Per 100	600 Volts Cat. No.	600 Volts Per 100	600 Volts Wt., Lbs. Per 100
70	5	391–070	$180.00	46	393–070	$360.00	83
80	5	391–080	180.00	46	393–080	360.00	83
90	5	391–090	180.00	46	393–090	360.00	83
100	5	391–100	180.00	46	393–100	360.00	83
110	1	391–110	400.00	109	393–110	700.00	183
125	1	391–125	400.00	109	393–125	700.00	183
150	1	391–150	400.00	109	393–150	700.00	183
175	1	391–175	400.00	109	393–175	700.00	183
200	1	391–200	400.00	109	393–200	700.00	183
225	1	391–225	720.00	266	393–225	1400.00	373
250	1	391–250	720.00	266	393–250	1400.00	373
300	1	391–300	720.00	266	393–300	1400.00	373
350	1	391–350	720.00	266	393–350	1400.00	373
400	1	391–400	720.00	266	393–400	1400.00	373
450	1	391–450	1100.00	389	393–450	2000.00	573
500	1	391–500	1100.00	389	393–500	2000.00	573
600	1	391–600	1100.00	389	393–600	2000.00	573

Dimensions

Cap. Amp.	250 Volts Lgth. Over All In.	250 Volts Diam. Tube In.	250 Volts Width Blade In.	250 Volts Thick. Blade In.	600 Volts Lgth. Over All In.	600 Volts Diam. Tube In.	600 Volts Width Blade In.	600 Volts Thick. Blade In.
70–100	5⅞	1	¾	⅛	7⅞	1¼	¾	⅛
110–200	7⅛	1½	1⅛	3/16	9⅝	1¾	1⅛	3/16
225–400	8⅝	2	1⅝	¼	11⅝	2½	1⅝	¼
450–600	10⅜	2½	2	¼	13⅜	3	2	¼

Jefferson Super-Lag Renewable Links

Care should be taken to insure clean contact surfaces between the copper blades, renewals and washers. The nut should always be drawn up tight.

Ferrule Type

Cat. No.	Per 100	Cap. Amp.	Carton	Wt., Lbs. Per 100
250 Volts				
392–003	$2.00	3	100	¼
392–006	2.00	6	100	¼
392–010	2.00	10	100	¼
392–015	2.00	15	100	¼
392–020	2.00	20	100	¼
392–025	2.00	25	100	¼
392–030	2.00	30	100	¼
392–035	4.00	35	100	1
392–040	4.00	40	100	1
392–045	4.00	45	100	1
392–050	4.00	50	100	1
392–060	4.00	60	100	1
600 Volts				
394–003	$5.00	3	100	1
394–006	5.00	6	100	1
394–010	5.00	10	100	1
394–015	5.00	15	100	1
394–020	5.00	20	100	1
394–025	5.00	25	100	1
394–030	5.00	30	100	1
394–035	8.00	35	100	3
394–040	8.00	40	100	3
394–045	8.00	45	100	3
394–050	8.00	50	100	3
394–060	8.00	60	100	3

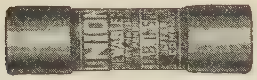
Knife Blade Type

Cat. No.	Per 100	Cap. Amp.	Carton	Wt., Lbs. Per 100
250 Volts				
392–070	$9.00	70	50	2
392–080	9.00	80	50	2
392–090	9.00	90	50	2
392–100	9.00	100	50	2
392–110	20.00	110	25	5
392–125	20.00	125	25	5
392–150	20.00	150	25	5
392–175	20.00	175	25	5
392–200	20.00	200	25	5
392–225	36.00	225	25	11
392–250	36.00	250	25	11
392–300	36.00	300	25	11
392–350	36.00	350	25	11
392–400	36.00	400	25	11
392–450	55.00	450	10	16
392–500	55.00	500	10	16
392–600	55.00	600	10	16
600 Volts				
394–070	$18.00	70	50	5.3
394–080	18.00	80	50	5.3
394–090	18.00	90	50	5.3
394–100	18.00	100	50	5.3
394–110	35.00	110	25	14.6
394–125	35.00	125	25	14.6
394–150	35.00	150	25	14.6
394–175	35.00	175	25	14.6
394–200	35.00	200	25	14.6
394–225	70.00	225	25	29
394–250	70.00	250	25	29
394–300	70.00	300	25	29
394–350	70.00	350	25	29
394–400	70.00	400	25	29
394–450	100.00	450	10	37
394–500	100.00	500	10	37
394–600	100.00	600	10	37

Union Renewable Fuses

250 and 600 Volts

Ferrule Type



3 to 60 Amperes

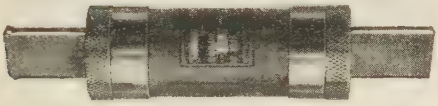
Only three simple parts, the absence of loose washers, both ends open for inspection and cleaning, and the link bent at one end which automatically adjusts it to the proper length are features that make the new ferrule type fuse quick and easy to renew.

		250 Volts			600 Volts		
Amperes	Carton	Cat. No.	Per 100	Wt. Lbs. 10 Full Cartons	Cat. No.	Per 100	Wt. Lbs. 10 Full Cartons
3	10	380–003	$40.00	6½	382–003	$100.00	18½
6	10	380–006	40.00	6½	382–006	100.00	18½
10	10	380–010	40.00	6½	382–010	100.00	18½
15	10	380–015	40.00	6½	382–015	100.00	18½
20	10	380–020	40.00	6½	382–020	100.00	18½
25	10	380–025	40.00	6½	382–025	100.00	18½
30	10	380–030	40.00	6½	382–030	100.00	18½
35	10	380–035	80.00	14	382–035	160.00	36
40	10	380–040	80.00	14	382–040	160.00	36
45	10	380–045	80.00	14	382–045	160.00	36
50	10	380–050	80.00	14	382–050	160.00	36
60	10	380–060	80.00	14	382–060	160.00	36

Dimensions

	250 Volts		600 Volts	
Amperes	Size Over All Inches	Size Tube Inches	Size Over All Inches	Size Tube Inches
1–30	2	½	5	¾
35–60	3	¾	5½	1

Knife Blade Type



70-600 Amperes

An exclusive feature of the knife-blade type fuse is the longitudinal vents which are cut in the fibre casing at both ends just inside the brass ends and which lead to the inside of the casing. When the link blows, the pressure of the volatilizing metal is relieved, and because of the low pressure area at the vents, the molten fuse metal is not forced into the cap and the stud threads.

A rugged fibre bar which will not warp holds the knife-blade assembly in perfect alignment and assures correct assembly of the fuse. Brass ends are riveted to fibre case.

		250 Volts			600 Volts		
Amperes	Carton	Cat. No.	Per 100	Wt. Lbs. 10 Full Cartons	Cat. No.	Per 100	Wt. Lbs. 10 Full Cartons
70	5	380-070	$180.00	19¼	382–070	$360.00	35
80	5	380–080	180.00	19¼	382–080	360.00	35
90	5	380–090	180.00	19¼	382–090	360.00	35
100	5	380–100	180.00	19¼	382-100	360.00	35
110	1	380-110	400.00	10	382-110	700.00	14
125	1	380-125	400.00	10	382–125	700.00	14
150	1	380-150	400.00	10	382–150	700.00	14
175	1	380–175	400.00	10	382–175	700.00	14
200	1	380-200	400.00	10	382–200	700.00	14
225	1	380–225	720.00	22	382–225	1400.00	35
250	1	380–250	720.00	22	382–250	1400.00	35
300	1	380–300	720.00	22	382-300	1400.00	35
350	1	380–350	720.00	22	382-350	1400.00	35
400	1	380–400	720.00	22	382–400	1400.00	35
450	1	380-450	1100.00	35	382–450	2000.00	52
500	1	380 500	1100.00	35	382–500	2000.00	52
600	1	380-600	1100.00	35	382–600	2000.00	52

Dimensions

	250 Volts		600 Volts	
Amperes	Length Over All Inches	Size Tube Inches	Length Over All Inches	Size Tube Inches
61–100	5⅞	1	7⅞	1¼
101–200	7⅛	1½	9⅝	1¾
201-400	8⅝	2	11⅝	2½
401–600	10⅜	2½	13⅜	3

Union Renewal Links

Ferrule Type

250 Volts

Cat. No.	Amperes	Price per 100	Carton	Wt. Lbs. 10 Full Cartons
381–003	3	$1.80	100	⅝
381–006	6	1.80	100	⅝
381-010	10	1.80	100	⅝
381–015	15	1.80	100	⅝
381–020	20	1.80	100	⅝
381–025	25	1.80	100	⅝
381–030	30	1.80	100	⅝
381–035	35	3.60	100	1 9/16
381–040	40	3.60	100	1 9/16
381–045	45	3.60	100	1 9/16
381–050	50	3.60	100	1 9/16
381–060	60	3.60	100	1 9/16
381–070	70	8.10	50	2¾
381-080	80	8.10	50	2¾
381 090	90	8.10	50	2¾
381–100	100	8.10	50	2¾
381–110	110	18.00	25	3⅝
381–125	125	18.00	25	3⅝
381–150	150	18.00	25	3⅝
381–175	175	18.00	25	3⅝
381–200	200	18.00	25	3⅝
381–225	225	32.40	10	1½
381–250	250	32.40	10	1½
381–300	300	32.40	10	1½
381–350	350	32.40	10	1½
381–400	400	32.40	10	1½
381–450	450	49.50	5	2
381–500	500	49.50	5	2
381 -600	600	49.50	5	2

600 Volts

Cat. No.	Amperes	Price per 100	Carton	Wt. Lbs. 10 Full Cartons
383–003	3	$4.50	100	3¾
383–006	6	4.50	100	3¾
383–010	10	4.50	100	3¾
383–015	15	4.50	100	3¾
383–020	20	4.50	100	3¾
383-025	25	4.50	100	3¾
383–030	30	4.50	100	3¾
383–035	35	7.20	100	10¼
383–040	40	7.20	100	10¼
383–045	45	7.20	100	10¼
383–050	50	7.20	100	10¼
383–060	60	7.20	100	10¼
383 070	70	16.20	50	7
383 080	80	16.20	50	7
383–090	90	16.20	50	7
383–100	100	16.20	50	7
383–110	110	31.50	25	10½
383-125	125	31.50	25	10½
383–150	150	31.50	25	10½
383–175	175	31.50	25	10½
383–200	200	31.50	25	10½
383–225	225	63.00	10	5
383 -250	250	63.00	10	5
383 300	300	63.00	10	5
383–350	350	63.00	10	5
383–400	400	63.00	10	5
383–450	450	90.00	5	5⅝
383–500	500	90.00	5	5⅝
383–600	600	90.00	5	5⅝

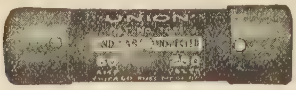
To Make Up Links Over 200 Amperes Use:

For Links Amps.	No. of Links	Size Links Amps.	For Links Amps.	No. of Links	Size Links Amps.	For Links Amps.	No. of Links	Size Links Amps.
225	2	112½	350	2	175	500	4	*125
250	2	125	400	2	200	600	4	*150
300	2	150	450	4	*112½	...	.	....

*Where 4 links are required, 2 links separated by spacer washers should be placed on each side of copper blade.

Union Indicating Enclosed Fuses

Ferrule Contact Style



Amp.	Carton	250 Volts No.	250 Volts Each	250 Volts Wt. Lbs. 10 Full Cartons	600 Volts No.	600 Volts Each	600 Volts Wt. Lbs. 10 Full Cartons
3	10	386–003	$.15	4	387–003	$.50	14¾
6	10	386–006	.15	4	387–006	.50	14¾
10	10	386–010	.15	4	387–010	.50	14¾
15	10	386–015	.15	4	387–015	.50	14¾
20	10	386–020	.15	4	387–020	.50	14¾
25	10	386–025	.15	4	387–025	.50	14¾
30	10	386–030	.15	4	387–030	.50	14¾
35	10	386–035	.30	10½	387–035	.80	24¾
40	10	386–040	.30	10½	387–040	.80	24¾
45	10	386–045	.30	10½	387–045	.80	24¾
50	10	386–050	.30	10½	387–050	.80	24¾
60	10	386–060	.30	10½	387–060	.80	24¾

Dimensions

Amperes	250 Volts Length Over All Inches	250 Volts Diameter Tube Inches	600 Volts Length Over All Inches	600 Volts Diameter Tube Inches
1–30	2	½	5	¾
35–60	3	¾	5½	1

Knife-Blade Contact Style

Amp.	Carton	250 Volts No.	250 Volts Each	250 Volts Wt. Lbs. 10 Full Cartons	600 Volts No.	600 Volts Each	600 Volts Wt. Lbs. 10 Full Cartons
70	5	386–070	$ .90	15	387–070	$1.80	27
80	5	386–080	.90	15	387–080	1.80	27
90	5	386–090	.90	15	387–090	1.80	27
100	5	386–100	.90	15	387–100	1.80	27
110	1	386–110	2.00	7¾	387–110	3.50	12½
125	1	386–125	2.00	7¾	387–125	3.50	12½
150	1	386–150	2.00	7¾	387–150	3.50	12½
175	1	386–175	2.00	7¾	387–175	3.50	12½
200	1	386–200	2.00	7¾	387–200	3.50	12½
225	1	386–225	3.60	17¼	387–225	7.00	29
250	1	386–250	3.60	17¼	387–250	7.00	29
300	1	386–300	3.60	17¼	387–300	7.00	29
350	1	386–350	3.60	17¼	387–350	7.00	29
400	1	386–400	3.60	17¼	387–400	7.00	29
450	1	386–450	5.50	28	387–450	10.00	43
500	1	386–500	5.50	28	387–500	10.00	43
600	1	386–600	5.50	28	387–600	10.00	43
* 700	1	386–700	12.00	50½	387–700	15.00	77½
* 800	1	386–800	12.00	50½	387–800	15.00	77½
* 900	1	386–900	15.00	72½	387–900	18.00	92½
*1000	1	386–999	15.00	72½	387–999	18.00	92½

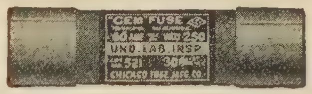
Dimensions

Amperes	250 Volts Length Over All Inches	250 Volts Diameter Tube Inches	600 Volts Length Over All Inches	600 Volts Diameter Tube Inches
61–100	5⅞	1	7⅞	1¼
101–200	7⅛	1½	9⅝	1¾
201–400	8⅝	2	11⅝	2½
401–600	10⅜	2½	13⅜	3
601–800	11½	3	14½	3½
801–1000	12⅝	3½	15⅝	4

*The National Electrical Code does not cover any type of 250-volt enclosed fuse above 600 amperes. Fuses of higher capacity are not listed as Standard by the Underwriters' Laboratories but are built to the same strict standards as those so listed.

Gem Non-Indicating Enclosed Fuses

Ferrule Style

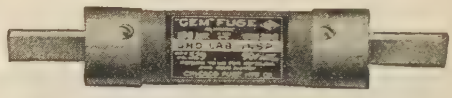


Amp.	Carton	250 Volts No.	250 Volts Each	250 Volts Wt. Lbs. 10 Full Cartons	600 Volts No.	600 Volts Each	600 Volts Wt. Lbs. 10 Full Cartons
1	10	384–001	$.15	4	385–001	$.50	14¾
3	10	384–003	.15	4	385–003	.50	14¾
6	10	384–006	.15	4	385–006	.50	14¾
10	10	384–010	.15	4	385–010	.50	14¾
15	10	384–015	.15	4	385–015	.50	14¾
20	10	384–020	.15	4	385–020	.50	14¾
25	10	384–025	.15	4	385–025	.50	14¾
30	10	384–030	.15	4	385–030	.50	14¾
35	10	384–035	.30	10½	385–035	.80	24¾
40	10	384–040	.30	10½	385–040	.80	24¾
45	10	384–045	.30	10½	385–045	.80	24¾
50	10	384–050	.30	10½	385–050	.80	24¾
60	10	384–060	.30	10½	385–060	.80	24¾

Dimensions

Amperes	250 Volts Length Over All Inches	250 Volts Diameter Tube Inches	600 Volts Length Over All Inches	600 Volts Diameter Tube Inches
1–30	2	½	5	¾
35–60	3	¾	5½	1

Knife-Blade Style



Amp.	Carton	250 Volts No.	250 Volts Each	250 Volts Wt. Lbs. 10 Full Cartons	600 Volts No.	600 Volts Each	600 Volts Wt. Lbs. 10 Full Cartons
70	5	384–070	$ .90	15	385–070	$1.80	27
80	5	384–080	.90	15	385–080	1.80	27
90	5	384–090	.90	15	385–090	1.80	27
100	5	384–100	.90	15	385–100	1.80	27
110	1	384–110	2.00	7¾	385–110	3.50	12½
125	1	384–125	2.00	7¾	385–125	3.50	12½
150	1	384–150	2.00	7¾	385–150	3.50	12½
175	1	384–175	2.00	7¾	385–175	3.50	12½
200	1	384–200	2.00	7¾	385–200	3.50	12½
225	1	384–225	3.60	17¼	385–225	7.00	29
250	1	384–250	3.60	17¼	385–250	7.00	29
300	1	384–300	3.60	17¼	385–300	7.00	29
350	1	384–350	3.60	17¼	385–350	7.00	29
400	1	384–400	3.60	17¼	385–400	7.00	29
450	1	384–450	5.50	28	385–450	10.00	43
500	1	384–500	5.50	28	385–500	10.00	43
600	1	384–600	5.50	28	385–600	10.00	43
* 700	1	384–700	12.00	50½	385–700	15.00	77½
* 800	1	384–800	12.00	50½	385–800	15.00	77½
* 900	1	384–900	15.00	72½	385–900	18.00	92½
*1000	1	384–999	15.00	72½	385–999	18.00	92½

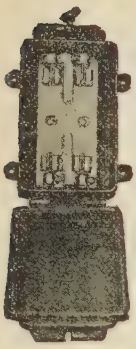
Dimensions

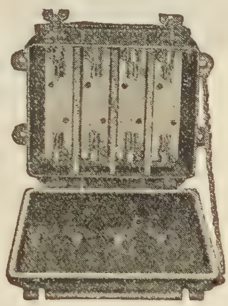
Amperes	250 Volts Length Over All Inches	250 Volts Diameter Tube Inches	600 Volts Length Over All Inches	600 Volts Diameter Tube Inches
61–100	5⅞	1	7⅞	1¼
101–200	7⅛	1½	9⅝	1¾
201–400	8⅝	2	11⅝	2½
401–600	10⅜	2½	13⅜	3
601–800	11½	3	14½	3½
801–1000	12⅝	3½	15⅝	4

*The National Electrical Code does not cover any type of 250-volt enclosed fuse above 600 amp. Fuses of higher capacity are not listed as Standard by the Underwriters' Laboratories but are built to the same strict standards as those so listed.

Colt-Noark Water-Tight Fuse Boxes

For Potentials Not Exceeding 250 Volts


No. 3670


No. 3190

Each box requires a fitting at each end.

2 Poles—All Fusible

Cat. No.	Each	Amps.	Type	Dimensions, Inches Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs.
3872	$4.95	0–30	B	7	5	3¾	10	5
3873	7.15	31–60	B	8⅜	6	4¾	5	10
3670	10.20	61–100	E	10⅝	7¼	4⅞	5	13
3671	21.45	101–200	E	13⅜	10¼	6¼	5	33
3672	35.20	201–400	E	16⅛	12½	7	5	60
3673	55.00	401–600	E	19¼	15	8½	3	74

3 Poles—All Fusible

Cat. No.	Each	Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs.
3874	$6.60	0–30	B	7	6⅜	3¾	10	8
3875	8.25	31–60	B	8⅜	7¼	4¾	5	11
3674	11.00	61–100	E	10⅝	9	4⅞	5	18
3675	26.40	101–200	E	13⅜	13⅛	6¼	3	43
3676	49.50	201–400	E	16⅛	16⅛	7	1	89
3677	82.50	401–600	E	19¼	19¼	8½	1	120

3 Poles—2 Fusible—Neutral Nonfusible

Cat. No.	Each	Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs.
3876	$6.60	0–30	B	7	6⅜	3¾	10	8
3877	8.25	31–60	B	8⅜	7¼	4¾	5	11
3865	11.00	61–100	E	10⅝	9	4⅞	5	18
3866	26.40	101–200	E	13⅛	13⅛	6¼	3	43
3867	49.50	201–400	E	16⅛	16⅛	7	1	89
3868	82.50	401–600	E	19¼	19¼	8¼	1	120

4 Poles—All Fusible

Cat. No.	Each	Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs.
3190	$19.80	61–100	E	10⅝	11¼	4⅞	5	22
3191	39.60	101–200	E	13⅜	16	6¼	3	49
3192	69.30	201–400	E	16⅛	20	7	1	90
3193	104.50	401–600	E	19¼	23⅜	8½	1	143

4 Poles—3 Fusible—Neutral Nonfusible

Cat. No.	Each	Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs.
3194	$19.80	61–100	E	10⅝	11¼	4⅞	5	22
3195	39.60	101–200	E	13⅜	16	6¼	3	49
3196	69.30	201–400	E	16⅛	20	7	1	90
3197	104.50	401–600	E	19¼	23⅜	8½	1	143

For Potentials Not Exceeding 600 Volts

2 Poles—All Fusible

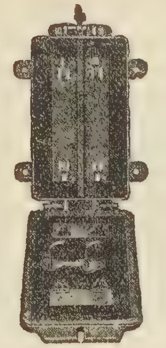
Cat. No.	Each	Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs.
5889	$11.00	0–30	B	11	7¼	4¾	5	15
5890	14.30	31–60	B	12⅛	8½	5¼	5	20
5760	17.60	61–100	E	14¾	10¼	5	4	29
5761	29.15	101–200	E	17¾	12⅛	6	4	50
5762	55.00	201–400	E	20½	15	7	8	74
5763	93.50	401–600	E	26	16¼	9	1	146

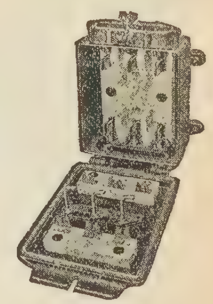
3 Poles—All Fusible

Cat. No.	Each	Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs.
5891	$14.30	0–30	B	11	9⅛	4¾	5	19
5892	18.15	31–60	B	12⅛	10⅞	5¼	5	27
5764	22.00	61–100	E	14¾	13¾	5½	4	39
5765	35.20	101–200	E	17¾	15¼	6½	4	64
5766	71.50	201–400	E	20½	19¼	7½	1	112
5767	110.00	401–600	E	26	21¼	9	1	221

Colt-Noark Water-Tight Service Boxes

For Potentials Not Exceeding 250 Volts


No. 3678


No. 3682

2 Poles—All Fusible

Cat. No.	Cap. Amps.	Type	Dimensions, Inches. Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs. Each	Price Each
3828	0–30	B	7	5	3¾	10	5½	$7.70
3829	31–60	B	8⅜	6	4¾	5	10½	10.45
3678	61–100	E	10⅝	7¼	4⅞	5	15	16.50
3679	101–200	E	13⅜	10¼	6¼	5	34	25.85
3680	201–400	E	16⅛	12½	7	5	62	41.80
3681	401–600	E	19¼	15	8½	3	76	66.00

3 Poles—All Fusible

Cat. No.	Cap. Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs. Each	Price Each
3830	0–30	B	7	6⅜	3¾	10	8½	$9.65
3831	31–60	B	8⅜	7¼	4¾	5	11½	13.20
3682	61–100	E	10⅝	9	4⅞	5	19½	17.60
3683	101–200	E	13⅜	13⅛	6¼	3	45	31.90
3684	201–400	E	16⅛	16⅛	7	1	93	55.00
3685	401–600	E	19¼	19¼	8½	1	126	93.50

3 Poles—2 Fusible—Neutral Nonfusible

Cat. No.	Cap. Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs. Each	Price Each
3870	0–30	B	7	6⅜	3¾	10	8½	$9.65
3871	31–60	B	8⅜	7¼	4¾	5	11½	13.20
3661	61–100	E	10⅝	9	4⅞	5	19½	17.60
3662	101–200	E	13⅜	13⅛	6¼	3	45	31.90
3663	201–400	E	16⅛	16⅛	7	1	93	55.00
3664	401–600	E	19¼	19¼	8½	1	126	93.50

4 Poles—All Fusible

Cat. No.	Cap. Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs. Each	Price Each
3182	61–100	E	10⅝	11¼	4⅞	5	24	$27.50
3183	101–200	E	13⅜	16	6¼	3	52	52.80
3184	201–400	E	16⅛	20	7	1	94	82.50
3185	401–600	E	19¼	23⅜	8½	1	148	126.50

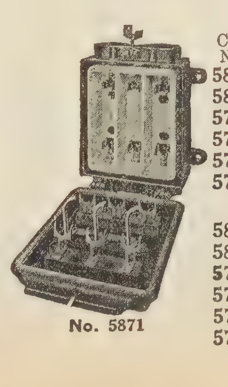
4 Poles—3 Fusible—Neutral Nonfusible

Cat. No.	Cap. Amps.	Type	Lgth.	Width	Ht.	Std. Pkg.	Wt., Lbs. Each	Price Each
3186	61–100	E	10⅝	11¼	4⅞	5	24	$27.50
3187	101–200	E	13⅜	16	6¼	3	52	52.80
3188	201–400	E	16⅛	20	7	1	94	82.50
3189	401–600	E	19¼	23⅜	8½	1	148	126.50

Colt-Noark Water-Tight Service Boxes

For Potentials Not Exceeding 600 Volts

Nos. 5868, 5869, 5870 and 5871 type B, all others type E.


No. 5871

2 Poles—All Fusible

Cat. No.	Each	Amperes	Dimensions Inches Lgth.	Width	Ht.	Std. Pkg.	Wt. Lbs. Each
5868	$13.75	0–30	11	7¼	4¾	5	16
5869	17.35	31–60	12⅛	8½	5¼	5	22
5770	23.65	61–100	14¾	10¼	5½	4	30½
5771	35.20	101–200	17¾	12⅛	6½	4	51
5772	66.00	201–400	20½	15	7½	1	76½
5773	110.00	401–600	26	16¾	9	1	150

3 Poles—All Fusible

Cat. No.	Each	Amperes	Lgth.	Width	Ht.	Std. Pkg.	Wt. Lbs. Each
5870	17.90	0–30	11	9⅛	4¾	5	21
5871	22.00	31–60	12⅛	10⅞	5¼	5	30
5774	26.95	61–100	14¾	13¾	5½	4	41
5775	41.80	101–200	17¾	15¼	6½	4	66
5776	82.50	201–400	20½	19¼	7½	1	114
5777	137.50	401–600	26	21¼	9	1	225

No. 3702

Colt-Noark Straight-away Conduit Fittings

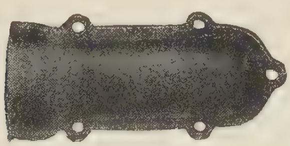
For Water-Tight Service and Fuse Boxes

For Potentials Not Exceeding 250 Volts

Fittings Cat. No.	Size Pipe Thread In.	Std. Pkg.	Wt. Lbs. Each	Price Each	These Fittings for — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
3832	1	20	¾	$1.05	3828	3872	0–30	B	2
3833	1¼	10	1¼	1.20	3829	3873	31–60	B	2
3702	1½	10	1½	1.75	3678	3670	61–100	E	2
3703	2	10	3	2.55	3679	3671	101–200	E	2
3704	2½	10	4	3.60	3680	3672	201–400	E	2
3705	3	6	8	5.50	3681	3673	401–600	E	2
3834	1	20	1¼	1.20	3830 3870	3874 3876	0–30	B	3
3835	1¼	10	1¾	1.65	3831 3871	3875 3877	31–60	B	3
3706	1½	10	2	1.95	3682 3661	3674 3865	61–100	E	3
3707	2	6	4	3.30	3683 3662	3675 3866	101–200	E	3
3708	2½	2	5½	4.95	3684 3663	3676 3867	201–400	E	3
3709	3	2	10	7.15	3685 3664	3677 3868	401–600	E	3
3935	1½	10	4	2.75	3182	3190	61–100	E	4
3936	2	10	4	2.75	3186	3194			
3937	2½	10	4	2.75					
3938	2	6	8	4.40	3183	3191	101–200	E	4
3939	2½	6	8	4.40	3187	3195			
3940	3	6	8	4.40					
3941	3	2	14	6.60	3184	3192	201–400	E	4
3942	3½	2	14	6.60	3188	3196			
3943	4	2	14	6.60					
3944	4	2	22	13.20	3185	3193	401–600	E	4
3945	4½	2	22	13.20	3189	3197			
3946	5	2	22	13.20					

Colt-Noark Right or Left-Hand Conduit Fittings For Water-Tight Service and Fuse Boxes

For Potentials Not Exceeding 250 Volts



No. 3710

Fittings Cat. No.	Size Pipe Thread In.	Std. Pkg.	Wt. Lbs. Each	Price Each	These Fittings for — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
3836	1	20	¾	$1.05	3828	3872	0–30	B	2
3837	1¼	10	1	1.20	3829	3873	31–60	B	2
3710	1½	10	1¼	1.75	3678	3670	61–100	E	2
3711	2	10	2¼	2.55	3679	3671	101–200	E	2
3712	2½	10	3½	3.60	3680	3672	201–400	E	2
3713	3	6	6	5.50	3681	3673	401–600	E	2
3838	1	20	¾	1.20	3830 3870	3874 3876	0–30	B	3
3839	1¼	10	1	1.65	3831 3871	3875 3877	31–60	B	3
3714	1½	10	1¾	1.95	3682 3661	3674 3865	61–100	E	3
3715	2	6	4	3.30	3683 3662	3675 3866	101–200	E	3
3716	2½	2	6	4.95	3684 3663	3676 3867	201–400	E	3
3717	3	2	12	7.15	3685 3664	3677 3868	401–600	E	3

Colt-Noark Conduit Fittings for Water-Tight Service and Fuse Boxes

For Potentials Not Exceeding 250 Volts

No. 3718

Back Entrance Conduit Fitting

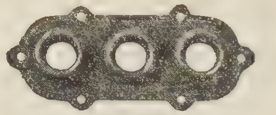
Fittings Cat. No.	Each	Size Pipe Thread In.	Std. Pkg.	Wt. Lbs. Each	These Fittings for — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
3780	$1.05	1	20	¾	3828	3872	0–30	B	2
3781	1.20	1¼	10	1	3829	3873	31–60	B	2
3718	1.75	1½	10	1½	3678	3670	61–100	E	2
3719	2.55	2	10	2	3679	3671	101–200	E	2
3720	3.60	2½	10	3¼	3680	3672	201–400	E	2
3721	5.50	3	6	5	3681	3673	401–600	E	2
3782	1.20	1	20	1	3830 3870	3874 3876	0–30	B	3
3783	1.65	1¼	10	1	3831 3871	3875 3877	31–60	B	3
3722	1.95	1½	10	1½	3682 3661	3674 3865	61–100	E	3
3723	3.30	2	6	3¼	3683 3662	3675 3866	101–200	E	3
3724	4.95	2½	2	5¼	3684 3663	3676 3867	201–400	E	3
3730	7.15	3	2	8	3865 3664	3677 3868	401–600	E	3

No. 3744

Entrance Hoods

Fittings Cat. No.	Each	Size Pipe Thread In.	Std. Pkg.	Wt. Lbs. Each	Service Box	Fuse Box	Amps.	Type	Poles
3784	$2.00	...	20	1½	3828	3872	0–30	B	2
3785	2.65	...	10	1¾	3829	3873	31–60	B	2
3740	3.30	..	10	2	3678	3670	61–100	E	2
3741	4.40	...	10	4¼	3679	3671	101–200	E	2
*3742	6.60	...	10	7¼	3680	3672	201–400	E	2
3743	11.00	...	6	9	3681	3673	401–600	E	2
3786	2.75		20	1¾	3830 3870	3874 3876	0–30	B	3
3787	3.05		10	2¼	3831 3871	3875 3877	31–60	B	3
*3744	4.15	...	10	3¼	3682 3661	3674 3865	61–100	E	3
*3745	5.25	...	6	7¾	3683 3662	3675 3866	101–200	E	3
3746	7.70	...	2	9¾	3684 3663	3676 3867	201–400	E	3
3747	13.75	...	2	15	3685 3664	3677 3868	401–600	E	3
*3947	5.50	.	10	6	3182 3186	3190 3194	61–100	E	4
*3948	8.25	..	6	11	3183 3187	3191 3195	101–200	E	4
*3949	14.85	...	2	20	3184 3188	3192 3196	201–400	E	4

*Split hoods.



No. 3983

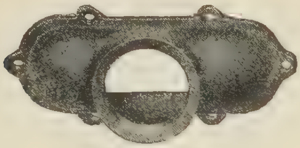
Bushing Plates

Fittings Cat. No.	Each	Size Pipe Thread In.	Std. Pkg.	Wt. Lbs. Each	Service Box	Fuse Box	Amps.	Type	Poles
3975	1.00	...	20	⅜	3828	3872	0–30	B	2
3976	1.10		10	½	3829	3873	31–60	B	2
3977	1.40	...	10	⅝	3678	3670	61–100	E	2
3978	1.95	.	10	1	3679	3671	101–200	E	2
3979	2.20	...	10	1¾	3680	3672	201–400	E	2
3980	2.75	...	6	2½	3681	3673	401–600	E	2
3981	1.40	...	20	½	3830 3870	3874 3876	0–30	B	3
3982	1.50	...	10	⅝	3831 3871	3875 3877	31–60	B	3
3983	1.65	...	10	¾	3682 3661	3674 3865	61–100	E	3
3984	2.50	..	6	1½	3683 3662	3675 3866	101–200	E	3
3985	3.05	...	2	2½	3684 3663	3676 3867	201–400	E	3
3986	3.85	...	2	3¼	3685 3664	3677 3868	401–600	E	3
3987	2.20	...	10	1⅜	3182 3186	3190 3194	61–100	E	4
3988	3.05	...	6	2	3183 3187	3191 3195	101–200	E	4
3989	3.60	...	2	3¼	3184 3188	3192 3196	201–400	E	4
3990	5.50	...	2	4¼	3185 3189	3193 3197	401–600	E	4

Colt-Noark Conduit Fittings for Water-Tight Service and Fuse Boxes

For Potentials Not Exceeding 600 Volts

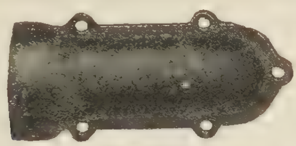
Straightaway Conduit Fittings



No. 5784

Fittings Cat. No.	Size Pipe Thread In.	Std. Pkg.	Wt. Lbs. Each	Price Each	These Fittings For — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
5872	1	10	1	$1.35	5868	5889	0–30	B	2
5873	1¼	10	1½	1.65	5869	5890	31–60	B	2
5780	1½	8	1½	2.20	5770	5760	61–100	E	2
5781	2	8	2¾	3.05	5771	5761	101–200	E	2
5782	2½	6	4¼	4.70	5772	5762	201–400	E	2
5783	3	2	6¼	7.15	5773	5763	401–600	E	2
5874	1	10	1¼	1.50	5870	5891	0–30	B	3
5875	1¼	10	2½	1.95	5871	5892	31–60	B	3
5784	1½	8	3½	2.75	5774	5764	61–100	E	3
5785	2	8	4¾	3.85	5775	5765	101–200	E	3
5786	2½	2	6	6.05	5776	5766	201–400	E	3
5787	3	2	11	9.90	5777	5767	401–600	E	3

Right or Left Hand Conduit Fittings



No. 5794

Fittings Cat. No.	Size Pipe Thread In	Std. Pkg.	Wt. Lbs. Each	Price Each	These Fittings For — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
5876	1	10	1	$1.35	5868	5889	0–30	B	2
5877	1¼	10	1¼	1.65	5869	5890	31–60	B	2
5790	1½	8	1¼	2.20	5770	5760	61–100	E	2
5791	2	8	2½	3.05	5771	5761	101–200	E	2
5792	2½	6	4½	4.70	5772	5762	201–400	E	2
5793	3	2	5¾	7.15	5773	5763	401–600	E	2
5878	1	10	1¼	1.50	5870	5891	0–30	B	3
5879	1¼	10	1¾	1.95	5871	5892	31–60	B	3
5794	1½	8	2	2.75	5774	5764	61–100	E	3
5795	2	8	4	3.85	5775	5765	101–200	E	3
5796	2½	2	7	6.05	5776	5766	201–400	E	3
5797	3	2	8¼	9.90	5777	5767	401–600	E	3

Back Entrance Conduit Fittings

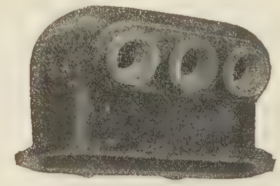
No. 5804

Fittings Cat. No.	Size Pipe Thread In.	Std. Pkg.	Wt. Lbs. Each	Price Each	These Fittings For — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
5880	1	10	¾	$1.35	5868	5889	0–30	B	2
5881	1¼	10	1¼	1.65	5869	5890	31–60	B	2
5800	1½	8	1¼	2.20	5770	5760	61–100	E	2
5801	2	8	2½	3.05	5771	5761	101–200	E	2
5802	2½	6	4	4.70	5772	5762	201–400	E	2
5803	3	2	5¾	7.15	5773	5763	401–600	E	2
5882	1	10	1¼	1.50	5870	5891	0–30	B	3
5883	1¼	10	1¾	1.95	5871	5892	31–60	B	3
5804	1½	8	2½	2.75	5774	5764	61–100	E	3
5805	2	8	3½	3.85	5775	5765	101–200	E	3
5806	2½	2	7	6.05	5776	5766	201–400	E	3
5807	3	2	8	9.90	5777	5767	401–600	E	3

Colt-Noark Conduit Fittings for Water-Tight Service and Fuse Boxes

For Potentials Not Exceeding 600 Volts

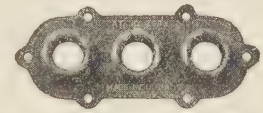
Entrance Hoods



No. 5824

Fittings Cat. No.	Each	Std. Pkg.	Wt. Lbs. Each	These Fittings For — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
5884	$2.20	10	1¾	5868	5889	0–30	B	2
5885	2.75	10	2	5869	5890	31–60	B	2
5820	3.85	8	2¼	5770	5760	61–100	E	2
5821	5.50	8	4¼	5771	5761	101–200	E	2
5822	8.25	2	6½	5772	5762	201–400	E	2
5823	13.75	2	8¾	5773	5763	401–600	E	2
5886	3.05	10	2	5870	5891	0–30	B	3
5887	3.30	10	3¼	5871	5892	31–60	B	3
5824	4.40	8	3¾	5774	5764	61–100	E	3
5825	6.05	8	6½	5775	5765	101–200	E	3
5826	9.35	2	10	5776	5766	201–400	E	3
5827	16.50	2	12½	5777	5767	401–600	E	3

Bushing Plates



No. 5983

5975	$1.10	10	½	5868	5889	0–30	B	2
5976	1.35	10	⅝	5869	5890	31–60	B	2
5977	1.65	8	¾	5770	5760	61–100	E	2
5978	2.20	8	1⅛	5771	5761	101–200	E	2
5979	3.05	2	2	5772	5762	201–400	E	2
5980	3.85	2	2¾	5773	5763	401–600	E	2
5981	1.45	10	⅝	5870	5891	0–30	B	3
5982	1.65	10	⅞	5871	5892	31–60	B	3
5983	1.95	8	1	5774	5764	61–100	E	3
5984	2.75	8	1¾	5775	5765	101–200	E	3
5985	3.60	2	2¾	5776	5766	201–400	E	3
5986	4.95	2	3¾	5777	5767	401–600	E	3

NOTE.—End plates with brass wiping sleeves for lead covered cable can be supplied as special fittings. Prices upon application.

Gaskets

No. 5810

Fittings Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.	These Fittings For — Cat. No. Service Box	Fuse Box	Amps.	Type	Poles
5665	$.35	10	¼	5868	5889	0–30	B	2
5666	.40	10	⅜	5869	5890	31–60	B	2
5810	.50	8	¾	5770	5760	61–100	E	2
5811	.60	8	1	5771	5761	101–200	E	2
5812	.85	2	¼	5772	5762	201–400	E	2
5813	1.10	2	⅜	5773	5763	401–600	E	2
5667	.40	10	¼	5870	5891	0–30	B	3
5668	.50	10	⅜	5871	5892	31–60	B	3
5814	.55	8	¾	5774	5764	61–100	E	3
5815	.65	8	1	5775	5765	101–200	E	3
5816	.95	2	⅜	5776	5766	201–400	E	3
5814	1.40	2	½	5777	5767	401–600	E	3

Columbia Type A Surface Cabinets

For Cut-Outs Service Switches and Panel Boards

CONDUIT DRILLING.—Cabinets are regularly furnished with knockouts for ½-inch conduit spaced evenly on all sides. Specify if boxes are wanted without knockouts. For special conduit drilling, a small extra charge is made. Knockouts other than ½-inch can be supplied if required.

SIZES AND THICKNESS OF STEEL.—Cabinets are listed in standard sizes and gauges (thickness). Cabinets of any size and thickness of steel up to ⅜ inch thick can be made to order.

GALVANIZED CABINETS.—Type A Cabinets in any size can be furnished in galvanized steel. Add 15 per cent to list prices.

WEATHERPROOF CABINETS.—These cabinets can be made with slant tops, rubber gaskets and solid brass catches, for exposure to the weather. Black japan or galvanized.

HOLES FOR CUT-OUT, SWITCHES, ETC.—Furnished at cost of one cent per hole per box. For tapped holes, add two cents per hole per box.

BOXES WITHOUT COVERS.—If boxes are required without covers, deduct 20 per cent from prices. A flange will be supplied on front edges for mounting a wood trim or other cover if specified on order.

The boxes listed below are made of sheet steel of the required thickness to conform with Board of Underwriters' requirements, and bear the Underwriters' labels.

Width or Short Side Inches	Height or Long Side Inches	Price, Each — Depth, Inches 3	4	6	8	10	12
4½	5	$.75	.....	.....	.....	.....	.....
4½	9	1.10	.....	.....	.....	.....	.....
6	6	.90	$1.10	$1.33	.....	.....	.....
6	8	1.16	1.30	1.60	.....	.....	.....
6	9	1.37	1.67	2.00	.....	.....	.....
6	12	1.53	1.73	2.16	.....	.....	.....
8	8	1.33	1.56	1.90	$3.25	.....	.....
8	10	1.60	1.83	2.20	4.00	.....	.....
8	12	2.00	2.26	2.50	4.33	.....	.....
9	9	1.83	2.10	2.54	3.98	.....	.....
9	12	2.13	2.40	2.89	4.77	.....	.....
10	10	1.90	2.13	2.60	4.40	$5.20	.....
10	12	2.16	2.46	2.93	4.98	5.63	.....
10	15	2.60	2.90	3.46	5.80	6.60	.....
10	18	3.03	3.36	4.00	6.67	7.53	.....
12	12	2.50	2.73	3.33	5.93	6.60	$7.56
12	15	2.66	3.33	3.90	6.80	7.70	8.70
12	18	.....	3.86	4.50	7.80	8.76	9.86
12	24	.....	5.40	6.26	9.73	10.30	12.53
12	30	.....	11.93	13.80	14.93	16.80	19.26
12	36	.....	14.23	16.13	17.47	19.40	22.30
15	15	.....	3.93	4.60	7.96	9.03	9.93
15	18	.....	4.60	5.30	8.10	10.27	11.26
15	24	.....	6.33	7.30	11.47	12.73	14.80
15	30	.....	14.80	17.06	17.23	19.06	22.13

Columbia Type A Surface Cabinets

For Cut-Outs, Service Switches and Panel Boards

Width or Short Side In.	Ht. or Long Side Inches	Price, Each — Depth, Inches 4	6	8	10	12
15	36	$17.16	$18.90	$20.10	$22.13	$25.40
18	18	5.30	6.06	10.37	11.53	12.76
18	21	11.93	13.90	16.02	16.93	19.10
18	24	13.53	15.63	16.96	18.70	21.00
18	30	16.90	18.53	20.04	22.30	24.63
18	36	19.80	21.60	23.64	25.90	28.60
18	40	21.66	23.70	25.80	28.23	31.00
24	24	17.00	19.36	21.00	23 12	25.33
24	30	21.23	23.13	25.07	27 30	29.86
24	36	24.83	26.73	30.10	31.63	34.80
24	40	27.00	29.50	31.83	34.50	37.33
24	44	45.93	50.36	55.07	58.70	63.50
24	48	49.73	54.33	59.40	64.03	68.23
30	30	30.20	32.93	33.60	36.17	41.33
30	36	46.16	52.86	55.63	59.93	65.33
30	42	54.27	58 83	63 33	68.00	72.70
30	48	63.03	68.10	71.13	77.15	83.17
30	54	76.40	84 30	98 10	104.00	109.70
30	60	84.90	93.80	108.90	115 40	121 60
30	66	90.50	99.90	116.20	123.00	130.40
30	72	101.90	112.30	130.70	138 80	146 30
36	36	56.43	61.03	70.00	72.38	74.93
36	42	71.80	79.10	92.00	97.50	103 00
36	48	81.70	90.00	104.70	111.00	117.30
36	54	91.50	100.90	117.50	124.40	131.50
36	60	102.00	112.40	130.70	138.40	146.40
36	66	112.20	123.50	143.70	152.20	160.90
36	72	122.30	134.70	156.80	166.00	175.50
36	78	132.50	146.20	170.00	180.00	190.30
36	84	142.50	157.20	182.70	193.60	204.50
42	42	83.50	92.20	103.50	113.60	120.00
42	48	95.30	105.20	122.20	129.60	137.00
42	54	107.10	118.00	137.40	145.60	153.80
42	60	118.90	130.90	152.50	161.60	170.60
42	66	130.70	144.00	167.60	177.60	187.70
42	72	142.50	157.20	182.70	193.60	204.50
42	78	154.70	170.60	198.40	210.50	222 40
42	84	166.40	183.70	213.60	226 30	239.00
42	90	178.20	196.60	228.70	242 30	256 20
42	96	190.40	210.00	244.20	258.80	273.50
48	48	109.00	119.10	139.60	148.00	156.50
48	54	123.20	134.70	156.60	166.00	175.50
48	60	135.90	149.80	174.20	184.90	195.10
48	66	149.50	164.80	191.50	203.00	214.50
48	72	163.40	180.00	209.30	221.90	234.50
48	78	176.60	194.60	226.30	240.10	253.60
48	84	190.40	210.10	244.20	258.60	273.50
48	90	203.40	225.40	260.80	276.50	293.00
48	96	217.10	239.30	278.30	295.00	310.70
54	54	137.70	151.70	176.70	187.20	197.90
54	60	152.90	168.40	196.00	207.90	219.60
54	66	167.90	185.10	215.40	222.30	241.30
54	72	182.90	201.80	234.70	248.90	262.80
54	78	198.20	218.60	254.10	269.40	284.80
54	84	212.60	234.10	272.30	288.70	308.70
54	90	228.10	249.30	290.20	309.50	328.20
54	96	240.70	265.60	308.60	327.00	345.80
60	60	167.60	184.90	214.80	228.10	240.50
60	66	184.00	203.00	236.00	250.20	251.90
60	72	203.00	223.90	260.20	275.90	291.60
60	78	217.80	240.20	279.40	296.20	312.70
60	84	237.60	260.20	302.50	320.70	338.80
60	90	252.30	278.30	313.10	343.40	362.50
60	96	268.60	296.50	344.90	365.40	386.00

Columbia Type P Flush Cabinets

For Cut-Outs, Service Switches and Panel Boards

These cabinets are provided with removable steel trim and door Plain type without ornamental beads; body is formed from one piece of steel with corners folded in and securely welded.

Finished in black baked japan. Regularly equipped with knob and turn catch.

Cabinets having surface area of over 360 square inches are furnished with vault handle.

Cabinets can be supplied with any style hinges, catch or lock.

Holes for cut-outs, switches, etc., add one cent per hole per box net. For tapped holes, two cents per hole net. Minimum 50 cents net per order.

CONDUIT DRILLING.—Cabinets are regularly furnished with knockouts for ½-inch conduit. For special conduit drilling an extra charge will be made. Knockouts other than ½-inch are furnished at a net charge of $1.00 for each variation from ½ inch regardless of quantity. This covers any number of knockouts in any number of boxes.

Panel Board Cabinets

This style cabinet is especially adapted for panel boards. Give size of panel, or specify maker's name and manufacturer's number. Sizes not listed at proportionate prices. This style of cabinet can also be furnished for surface work if so ordered.

The boxes listed below are made of sheet steel of the required thickness to conform with Board of Underwriters' requirements and bear the Underwriters' labels.

All boxes are hinged on right unless otherwise specified. When ordering, specify hinged side first.

Width or Short Side Inches	Height or Long Side Inches	Each — Depth, Inches 3	4	6	8	10	12
4½	5	$4.30	.....	.....	.....	.....	.....
4½	9	4.46	.....	.....	.....	.....	.....
6	6	4.43	$4.76	$5.56	.....	.....	.....
6	8	4.60	5.00	5.96	.....	.....	.....
6	9	4.70	5.10	6.06	.....	.....	.....
6	12	5.10	5.50	6.23	.....	.....	.....
8	8	5.00	5.36	6.33	$6.80	.....	.....
8	10	5.33	5.73	6.70	7.36	.....	.....
8	12	5.50	5.96	6.96	7.93	.....	.....
9	9	5.23	5.70	6.66	7.43	.....	.....
9	12	5.76	6.20	7.16	8.40	...	
10	10	5.56	6.00	7.00	8.13	$8.90	
10	12	5.96	6.83	7.93	8.93	9.40	
10	15	6.56	7.06	8.56	10.03	11.00	
10	18	7.23	7.93	10.03	11.10	11.33	
12	12	6.06	6.96	8.76	9.56	10.30	$10.70
12	15	7.70	8.53	10.30	10.70	11.70	13.03
12	18	....	9.50	11.20	11.56	12.73	13.96
12	24	....	10.76	12.80	13.90	15.90	17.36
12	30	....	18.33	21.46	23.00	25.03	27.23
12	36	....	20.23	23.60	25.53	28.13	30.20

Columbia Type P Flush Cabinets

For Cut-Outs, Service Switches and Panel Boards

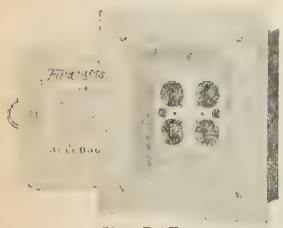
Width or Short Side Inches	Height or Long Side Inches	Price, Each — Depth, Inches 4	6	8	10	12
15	15	$9.86	$10.96	$12.20	$13.60	$15.96
15	18	10.48	12.30	13.83	15.26	16.60
15	24	12.40	14.60	16.46	18.03	17.36
15	30	22.66	26.03	27.76	30.13	32.70
15	36	25.13	28.73	30.73	34.60	35.30
18	18	11.36	13.40	15.03	16.53	18.00
18	21	17.23	19.86	21.36	23.20	25.96
18	24	19.46	22.60	23.90	25.90	28.00
18	30	24.93	28.00	30.10	32.80	34.66
18	36	27.70	30.76	33.23	35.70	38.00
18	40	30.43	33.43	36.30	38.96	41.36
24	24	24.50	27.90	29.53	31.76	34.13
24	30	31.20	34.83	37.26	40.10	42.80
24	36	34.60	38.36	42.26	44.23	48.23
24	40	38.00	41.80	45.03	48.33	51.36
24	44	51.59	57.87	69.70	70.58	78.25
24	48	54.46	61.23	74.06	76.76	82.93
30	30	37.70	41.70	44.33	47.26	50.26
30	36	51.30	56.93	60.96	64.23	68.60
30	42	61.60	67.30	69.43	74.43	79.26
30	48	65.60	72.33	75.96	80.70	86.27
30	54	88.20	98.00	113.60	117.60	121.50
30	60	98.00	108.90	126.30	130.70	135.00
30	66	104.70	116.30	136.50	139.60	144.10
30	72	117.60	130.70	152.00	156.70	161.80
36	36	58.70	66.20	70.80	75.90	80.60
36	42	82.80	92.10	106.70	110.40	114.10
36	48	94.10	104.70	121.50	125.60	129.90
36	54	105.70	117.40	136.10	141.00	145.70
36	60	117.60	130.70	151.70	156.70	162.10
36	66	134.40	149.30	158.30	179.10	185.10
36	72	140.80	156.80	181.80	188.00	194.30
36	78	152.90	169.90	197.10	203.90	210.70
36	84	164.30	182.70	212.00	219.30	226.50
42	42	95.60	106.50	123.90	128.30	133.00
42	48	110.00	121.60	140.40	145.20	150.00
42	54	123.40	137.40	159.50	165.00	170.40
42	60	137.40	152.50	176.80	183.00	189.00
42	66	150.70	167.50	194.60	200.90	207.50
42	72	164.30	182.70	211.90	219.10	226.40
42	78	178.50	198.40	230.20	238.10	244.90
42	84	190.60	211.80	245.60	254.10	262.60
42	90	203.90	226.30	250.20	271.80	280.50
42	96	216.70	240.80	279.50	289.20	298.60
48	48	125.90	139.80	162.20	167.90	173.30
48	54	139.60	155.60	180.50	186.80	193.10
48	60	157.00	172.30	199.20	205.70	212.30
48	66	171.40	192.50	220.20	228.80	234.90
48	72	184.50	204.50	236.20	244.20	250.90
48	78	201.40	223.90	247.80	269.40	278.00
48	84	216.70	240.80	279.50	289.20	298.60
48	90	233.90	259.90	301.30	307.10	322.10
48	96	249.40	273.80	321.60	332.50	343.60
54	54	159.50	174.70	201.70	208.10	214.80
54	60	172.80	193.80	221.40	230.10	236.10
54	66	191.80	213.00	247.00	255.30	263.80
54	72	211.00	232.30	265.10	274.40	286.50
54	78	227.60	251.70	290.40	300.10	309.50
54	84	244.50	272.30	316.80	327.70	338.80
54	90	261.00	295.00	345.00	356.00	372.00
54	96	278.90	311.00	360.60	372.70	384.80
60	60	191.80	211.80	243.60	251.30	259.50
60	66	211.90	236.00	274.70	284.40	293.80
60	72	233.90	259.90	301.30	307.10	322.10
60	78	283.70	279.50	324.00	334.90	346.10
60	84	271.70	303.70	353.30	365.40	377.50
60	90	291.20	323.20	375.10	388.20	401.70
60	96	310.20	344.90	399.30	413.80	428.10

Bull Dog Safety Fusenters

2 or 3-Wire Service, 125-250 Volts

30-Ampere Plug Fusible Circuits

Flush Mounting



No. B4F

The luminized fronts fit the finest decorative scheme or make an excellent base coat where other finishes are desired.

Numerous knockouts are provided. Plenty of wiring space makes for easy and economical wiring.

Circuit wire lies directly on screw shell, eliminating two joints per circuit over other types of contacts. Screw shells are removable and replaceable without removing fronts.

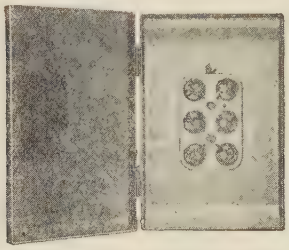
No. Circ.	Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.	Box Ref.
2	B2F	$2.25	25	75	A
4	B4F	3.00	10	74	B
6	B6F	5.00	10	100	C
8	B8F	7.50	5	75	D
10	B10F	11.00	5	85	E
12	B12F	15.00	5	92	E

Bull Dog Safety Fusenters

2 or 3-Wire Service, 125-250 Volts

30-Ampere Plug Fusible Circuits

Surface Mounting



No. CB6S

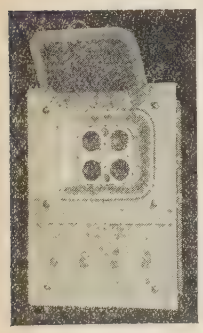
Flat covers with inside shield.

No. Circ.	Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.	Box Ref.
2	CB2S	$2.25	25	..	A
4	CB4S	3.00	10	68	B
6	CB6S	5.00	10	98	C
8	CB8S	7.50	5	75	D
10	CB10S	11.00	5	85	E
12	CB12S	15.00	5	92	E

Bull Dog Safety Fusenters

2 or 3-Wire Service, 125-250 Volts

30-Ampere Plug Fusible Circuits



No. BS4F

Equipped with switch plates provided with rectangular knockouts for standard makes of toggle switches as noted below.

Specially adapted for stores and other buildings where the cost factor precludes the use of more expensive panelboards.

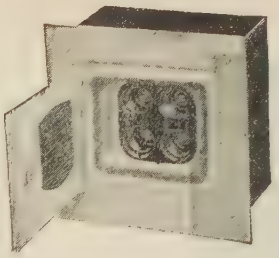
For gasoline filling stations the combination including a Saftofuse is much in demand.

The Saftofuse is a fusible switch.

Toggle switches are not included in the price nor furnished with Fusenters.

No. Circ.	Cat. No.	Each	Wt., Lbs. Each	Box Ref.
4	BS4F	$6.50	9	C
6	BS6F	9.00	15	E
8	BS8F	12.00	18	F
10	BS10F	15.00	19	G1
12	BS12F	18.00	22	G1

Square D Fuse Cabinets



No. 37421, Flush Type

Furnished in both black enamel and aluminum (baked on) finish.

Surface types can be attached to any standardized switch by the use of a nipple which will provide a branch circuit cabinet for meter switch use.

Packed 1 in a carton.

Flush Mounting Type

Cat. No.	Each	No. of Circuits	Color	Box No.	Weight Pounds
37221	$2.25	2	Aluminum	526-A	5
37211	2.25	2	Black	526-A	5
37421	3.00	4	Aluminum	526-A	5¾
37411	3.00	4	Black	526-A	5¾
37621	5.00	6	Aluminum	529	11
37611	5.00	6	Black	529	11
37821	7.50	8	Aluminum	...	..
37811	7.50	8	Black	...	..
37021	11.00	10	Aluminum	...	..
37011	11.00	10	Black	..	..
37121	15.00	12	Aluminum	..	..
37111	15.00	12	Black	.	..

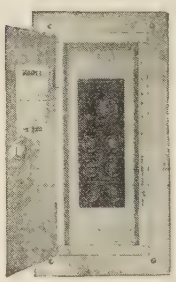
Surface Mounting Type

39211	2.25	2	Black	526-A	5
39411	3.00	4	Black	526-A	5½
39611	5.00	6	Black	529	10¾
39811	7.50	8	Black	...	..
39011	11.00	10	Black	. .	..
39111	15.00	12	Black	.	..

Square D Combination Fuse Cabinets

With 60 and 30-Ampere Circuits

3-Wire Mains—2-Wire, 30-Ampere Solid Neutral Branches
3-Wire, 60-Ampere Solid Neutral Branch



The 60-ampere fuses are attached to a bakelite cover so that when the cover or holder is removed, the fuses are disconnected and come out with the holder. Contact jaws are inaccessible as they are reversed below the surface, making them dead front.

Cabinets for flush mounting are aluminum; for surface mounting, black.

Standard package, 1. Cabinets are packed 5 to a carton.

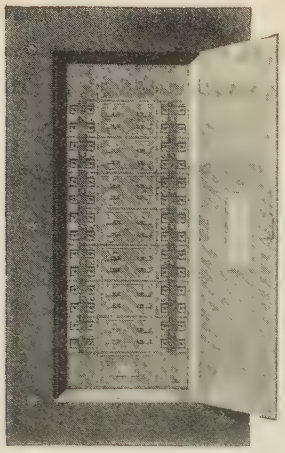
Flush Mounting

Cat. No.	Each	Description	Box No.	Wt., Lbs. Each
37122	$8.00	One 60-Amp. Only.....	529-A	13
37322	10.00	Two 30-Amp. Circuits and One 60-Amp. Circuit.....	529-A	10
37522	12.00	Four 30-Amp. Circuits and One 60-Amp. Circuit.....	530-A	12
37722	14.50	Six 30-Amp. Circuits and One 60-Amp. Circuit.....	532-A	14
37922	18.50	Eight 30-Amp. Circuits and One 60-Amp. Circuit.....	531-A	18

Surface Mounting

39112	7.50	One 60-Amp. Circuit Only.....	529-A	12
39312	9.50	Two 30-Amp. Circuits and One 60-Amp. Circuit.....	529-A	12
39512	11.50	Four 30-Amp. Circuits and One 60-Amp. Circuit.....	530-A	13.4
39712	13.50	Six 30-Amp. Circuits and One 60-Amp. Circuit.....	532-A	14
39912	17.50	Eight 30-Amp. Circuits and One 60-Amp. Circuit.....	531-A	15

Square D Lighting Panels



Galvanized boxes. Green duco trim.

Sections are of bakelite.

All exterior hardware is chromium plated.

All panels supplied either flush or surface mounting. Flush type is fitted with yale locks and latches.

No. NR3G Residence Type

Mains: 125-250 Volts, 3-Wire
Branches: 30-Ampere, Single Pole
Plug or Cartridge Fuses
Solid Neutral

Single door construction.

Residence type panel dimensions: 12 inches wide, 4 inches deep, and 3-inch gutters.

Cat. Nos. Complete Panel: Plug Fuses	Cat. Nos. Complete Panel: Cartridge Fuses	Each	Branches	Amp. Cap. of Mains
NRP3G04	NRC3G04	$16.00	4	30
NRP3G08	NRC3G08	20.00	8	60
NRP3G12	NRC3G12	24.00	12	60
NRP3G16	NRC3G16	30.00	16	100
NRP3G20	NRC3G20	34.00	20	100
NRP3G24	NRC3G24	42.00	24	100
NRP3G28	NRC3G28	48.00	28	100
NRP3G32	NRC3G32	54.00	32	100

Above panels equipped with lugs only in the mains.

Nos. NTP3 and NTC3 Standard Type

Mains: 125-250 Volts, 3-Wire
Branches: 30-Ampere, Single Pole Tumbler Switches
Plug or Cartridge Fuses
Main Lugs Only—Solid Neutral

Single door construction.

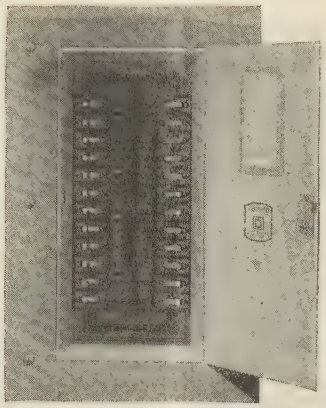
Standard type panel dimensions: 19 inches wide, 4½ inches deep, and 4-inch gutters.

NTP-304-L	NTC-304-L	$34.00	4	30
NTP-308-L	NTC-308-L	40.00	8	60
NTP-312-L	NTC-312-L	50.00	12	60
NTP-316-L	NTC-316-L	74.00	16	100
NTP-320-L	NTC-320-L	84.00	20	100
NTP-324-L	NTC-324-L	94.00	24	100
NTP-328-L	NTC-328-L	104.00	28	100
NTP-332-L	NTC-332-L	114.00	32	100
NTP-336-L	NTC-336-L	140.00	36	200
NTP-340-L	NTC-340-L	150.00	40	200

When ordering always specify whether for flush or surface mounting.

Square D Nofuze Lighting Panels

Single Pole—Solid Neutral
Main Lugs Only



Galvanized boxes. Green duco trims.

Specify flush or surface trim. Flush trim has ¾-inch extension all round.

All exterior parts are chromium plated.

No. NA1B-3

Mains: 125-250 Volts, 3 Wires, Solid Neutral
Branches: 125 Volts, 2-Wire with 15-Ampere, 125-Volt Single-Pole Breaker

Cat. No.	*Each	Branches	Amp. Cap. of Mains
NA1B-304-L050	$49.00	4	50
NA1B-306-L050	59.00	6	50
NA1B-308-L050	70.00	8	50
NA1B-310-L050	81.00	10	50
NA1B-312-L100	95.00	12	100
NA1B-314-L100	107.00	14	100
NA1B-316-L100	119.00	16	100
NA1B-318-L100	131.00	18	100
NA1B-320-L100	143.00	20	100
NA1B-322-L100	155.00	22	100
NA1B-324-L100	167.00	24	100
NA1B-326-L100	179.00	26	100
NA1B-328-L100	191.00	28	100
NA1B-330-L100	203.00	30	100
NA1B-332-L100	215.00	32	100
NA1B-334-L200	238.00	34	200
NA1B-336-L200	251.00	36	200
NA1B-338-L200	264.00	38	200
NA1B-340-L200	277.00	40	200

No. NA1B-4

Mains: 125-250 Volts, 3-Phase, 4-Wire, Solid Neutral
Branches: 125-Volt, 2-Wire with 15-Ampere, 125-Volt, Single-Pole Breaker

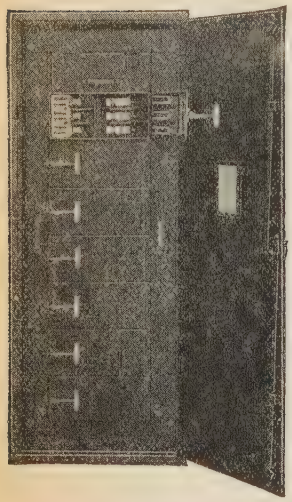
NA1B-404-L050	$51.00	4	50
NA1B-406-L050	62.00	6	50
NA1B-408-L050	73.00	8	50
NA1B-410-L050	85.00	10	50
NA1B-412-L050	96.00	12	50
NA1B-414-L050	108.00	14	50
NA1B-416-L100	122.00	16	100
NA1B-418-L100	134.00	18	100
NA1B-420-L100	146.00	20	100
NA1B-422-L100	158.00	22	100
NA1B-424-L100	170.00	24	100
NA1B-426-L100	182.00	26	100
NA1B-428-L100	194.00	28	100
NA1B-430-L100	206.00	30	100
NA1B-432-L100	218.00	32	100
NA1B-434-L100	238.00	34	100
NA1B-436-L100	251.00	36	100
NA1B-438-L100	264.00	38	100
NA1B-440-L100	277.00	40	100

*Prices are based on 15-ampere breakers. The 20 and 25-ampere breakers can be supplied at the same price, except increased main busbar capacity may be supplied, if required, at a small additional cost. The 35 and 50-ampere breakers can be supplied at $1.00 extra per circuit, plus increased busbar capacity.

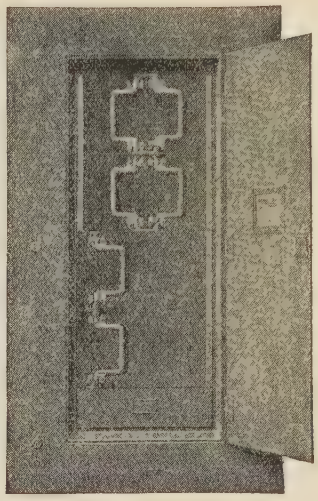
Square D Saflex Convertible Panels

For Flush or Surface Mounting

Listed by Underwriters Laboratories, Inc.



Saflex
30, 60, 100, 200, 400, or
600 Amps., 250 or 575 Volts



Saflex, Jr.
Shallow Type—6 Inches Deep,
19 Inches Wide
30, 60 or 100 Amps., 250 Volts

Features of Square D Saflex and Saflex, Jr. Panels:

Complete safety. No live parts can be touched and circuits may be opened safely under maximum loads.

All poles broken simultaneously. No possibility of single phasing.

Underwriters approval on switch for rupturing full load.

Unit switch can be locked in "on" and "off" positions.

Visible indication of "on" and "off" position of switch blades.

Adequate provision for fuse ventilation.

Oversize wiring gutters.

Current is broken by compact and separate switch element mounted between bus and fuse.

Units are of full 2 and 3-pole construction, requiring a minimum number of circuit parts to be mounted.

Light weight switch blade assembly is only part carried on steel unit door; fuses mounted on fixed base.

Saflex units are constructed to take 250-volt and 600-volt N.E.C. fuses in sizes from 30-ampere to 600-ampere. Switches are rated 230-volt and 575-volt a.c. and 250-volt d.c. Saflex, Jr. units are constructed for 30, 60, and 100-ampere, 250 volts only.

All units are readily removable and the various sizes are interchangeable within the same cabinets and upon the same bases.

Fuse jaws and clips are interchangeable within each unit without dismounting the unit.

Switch contacts are of the high pressure type.

Provision is made for testing fuses.

Cabinets may be supplied without interior or with complete interior assembly or with busses only, permitting the installation of interiors as required at a future date.

Interiors complete with busses can be readily mounted upon the mounting studs in the cabinet.

Metal blanks are supplied to cover busses for future circuit requirements.

Unit bases are made of ebony asbestos.

Standard finish is black.

Cabinet doors are equipped with chromium plated vault handles with integral Yale lock.

Units are mounted in individual steel boxes for maximum mechanical protection. No molded parts are exposed.

Unit doors are provided with steel guides independent of hinges to ensure alignment.

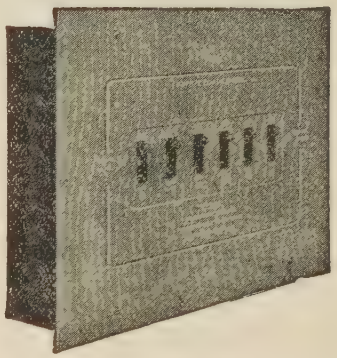
Prices and Complete Information upon Application

Square D Nofuze Load Centers

Single and Double Pole Arrangements

15, 20, 25, 35, and 50-Ampere Circuits

125, 125-250 Volts A.C. and D.C.



List prices are based on 15, 20, and 25-ampere circuits. For each 35 or 50-ampere single pole circuit substituted for each 15, 20, or 25-ampere single pole circuit, add 65 cents each list.

For each 35 or 50-ampere double pole circuit substituted for a 15, 20, or 25-ampere double pole circuit, add 75 cents each list.

Be sure to specify capacity of each circuit when ordering.

Nofuze Load Centers are shipped unassembled. Breakers, boxes and cover plates are packed individually.

Poles	*Circuit Arrangement	Cat. No. Flush Mounting	Cat. No. Surface Mounting	Each
2	2 SP	6102–02	6202–02	$14.75
	1 DP	6110–02	6210–02	15.25
3	3 SP	6103–04	6203–04	20.25
	1 SP-1 DP	6111–04	6211–04	20.75
4	4 SP	6104–04	6204–04	25.00
	2 SP-1 DP	6112–04	6212–04	25.50
	2 DP	6120–04	6220–04	26.00
5	5 SP	6105–06	6205–06	30.55
	3 SP-1 DP	6113–06	6213–06	31.05
	1 SP-2 DP	6121–06	6221–06	31.55
6	6 SP	6106–06	6206–06	35.30
	4 SP-1 DP	6114–06	6214–06	35.80
	2 SP-2 DP	6122–06	6222–06	36.30
	3 DP	6130–06	6230–06	36.80
7	7 SP	6107–08	6207–08	41.15
	5 SP-1 DP	6115–08	6215–08	41.65
	3 SP-2 DP	6123–08	6223–08	42.15
	1 SP-3 DP	6131–08	6231–08	42.65
8	8 SP	6108–08	6208–08	45.90
	6 SP-1 DP	6116–08	6216–08	46.40
	4 SP-2 DP	6124–08	6224–08	46.90
	2 SP-3 DP	6132–08	6232–08	47.40
	4 DP	6140–08	6240–08	47.90
9	9 SP	6109–10	6209–10	51.55
	7 SP-1 DP	6117–10	6217–10	52.05
	5 SP-2 DP	6125–10	6225–10	52.55
	3 SP-3 DP	6133–10	6233–10	53.05
	1 SP-4 DP	6141–10	6241–10	53.55
10	10 SP	6100–10	6200–10	56.30
	8 SP-1 DP	6118–10	6218–10	56.80
	6 SP-2 DP	6126–10	6226–10	57.30
	4 SP-3 DP	6134–10	6234–10	57.80
	2 SP-4 DP	6142–10	6242–10	58.30
	5 DP	6150–10	6250–10	58.80

*SP—single pole circuit. DP—double pole circuit with single operating handle.

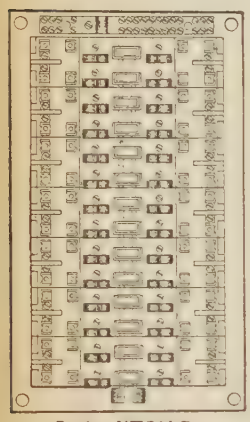
Bull Dog Lighting Panelboards

Using Overcurrent Protective Device in 1 Leg Only
Solid Neutral Bar in Other
Mains: 3-Wire, 125-250 Volts
Branches: 2-Wire, 125 Volts, Single Pole

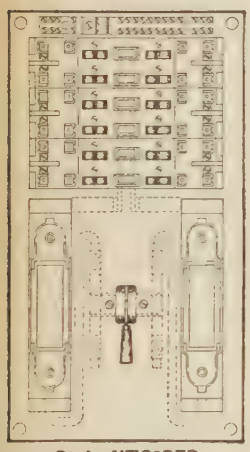
Branches, single pole or double pole toggle switches and 30-ampere plug or cartridge type fuse connections.

Cabinet dimensions, 20 inches wide, 5½ inches deep. Numeral in Box No. indicates height in inches. Wiring gutters, 4 inches.

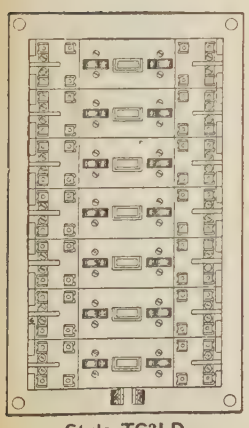
Cat. Nos. and prices include panel (less fuses) and cabinets complete.



Style NTC3LD



Style NTC3SFD



Style TC2LD

Double Door

30-Amp. Tumbler Switches, Plug Fuses
30-Amp. Tumbler Switches, Cartridge Fuses
Mains—Lugs Only

No. Circuits	Cat. Nos. Plug Fuses	Cat. Nos. Cartridge Fuses	Each	Amp. Mains	Box No.
4	NTP304LD	NTC304LD	$50.00	30	W14
8	NTP308LD	NTC308LD	60.00	60	W17
12	NTP312LD	NTC312LD	70.00	60	W20
16	NTP316LD	NTC316LD	86.00	100	W23
20	NTP320LD	NTC320LD	96.00	100	W26
24	NTP324LD	NTC324LD	106.00	100	W29
28	NTP328LD	NTC328LD	116.00	100	W32
32	NTP332LD	NTC332LD	126.00	100	W35
36	NTP336LD	NTC336LD	152.00	200	W41
40	NTP340LD	NTC340LD	162.00	200	W44
	Mains—Safety Fuse				
4	NTP304FD	NTC304FD	$62.00	30	W23
8	NTP308FD	NTC308FD	74.00	60	W26
12	NTP312FD	NTC312FD	86.00	60	W29
16	NTP316FD	NTC316FD	102.00	100	W35
20	NTP320FD	NTC320FD	114.00	100	W38
24	NTP324FD	NTC324FD	126.00	100	W41
28	NTP328FD	NTC328FD	138.00	100	W44
32	NTP332FD	NTC332FD	150.00	100	W47
36	NTP336FD	NTC336FD	178.00	200	W53
40	NTP340FD	NTC340FD	190.00	200	W56
	Mains—Fusible Switch				
4	NTP304SFD	NTC304SFD	$80.00	30	W23
8	NTP308SFD	NTC308SFD	90.00	60	W26
12	NTP312SFD	NTC312SFD	102.00	60	W29
16	NTP316SFD	NTC316SFD	122.00	100	W35
20	NTP320SFD	NTC320SFD	134.00	100	W38
24	NTP324SFD	NTC324SFD	146.00	100	W41
28	NTP328SFD	NTC328SFD	158.00	100	W44
32	NTP332SFD	NTC332SFD	170.00	100	W47
36	NTP336SFD	NTC336SFD	218.00	200	W53
40	NTP340SFD	NTC340SFD	230.00	200	W56

Single Door

30-Amp. Tumbler Switches, Plug Fuses
30-Amp. Tumbler Switches, Cartridge Fuses
Mains—Lugs Only

Cat. Nos. Plug Fuses	Cat. Nos. Cartridge Fuses	Each	Amp. Mains	Box No.
NTP304L	NTC304L	$34.00	30	W14
NTP308L	NTC308L	40.00	60	W17
NTP312L	NTC312L	50.00	60	W20
NTP316L	NTC316L	74.00	100	W23
NTP320L	NTC320L	84.00	100	W26
NTP324L	NTC324L	94.00	100	W29
NTP328L	NTC328L	104.00	100	W32
NTP332L	NTC332L	114.00	100	W35
NTP336L	NTC336L	140.00	200	W41
NTP340L	NTC340L	150.00	200	W44
Mains—Safety Fuse				
NTP304F	NTC304F	$46.00	30	W23
NTP308F	NTC308F	58.00	60	W26
NTP312F	NTC312F	70.00	60	W29
NTP316F	NTC316F	90.00	100	W35
NTP320F	NTC320F	102.00	100	W38
NTP324F	NTC324F	114.00	100	W41
NTP328F	NTC328F	126.00	100	W44
NTP332F	NTC332F	138.00	100	W47
NTP336F	NTC336F	166.00	200	W53
NTP340F	NTC340F	178.00	200	W56
Mains—Fusible Switch				
NTP304SF	NTC304SF	$64.00	30	W23
NTP308SF	NTC308SF	74.00	60	W26
NTP312SF	NTC312SF	86.00	60	W29
NTP316SF	NTC316SF	110.00	100	W35
NTP320SF	NTC320SF	122.00	100	W38
NTP324SF	NTC324SF	134.00	100	W41
NTP328SF	NTC328SF	146.00	100	W44
NTP332SF	NTC332SF	158.00	100	W47
NTP336SF	NTC336SF	206.00	200	W53
NTP340SF	NTC340SF	218.00	200	W56

Using Overcurrent Protective Devices in Both Legs
No Neutral Bar
Mains: 2-Wire, 125 Volts
Branches: 2-Wire, 125 Volts, Double Pole

	Mains—Lugs Only				
4	TP204LD	TC204LD	$62.00	60	W17
6	TP206LD	TC206LD	68.00	100	W20
8	TP208LD	TC208LD	78.00	100	W23
10	TP210LD	TC210LD	88.00	100	W26
12	TP212LD	TC212LD	98.00	200	W29
14	TP214LD	TC214LD	110.00	200	W32
16	TP216LD	TC216LD	120.00	200	W35
18	TP218LD	TC218LD	130.00	200	W38
20	TP220LD	TC220LD	140.00	200	W41
	Mains—Safety Fuse				
4	TP204FD	TC204FD	$74.00	60	W26
6	TP206FD	TC206FD	86.00	100	W32
8	TP208FD	TC208FD	96.00	100	W35
10	TP210FD	TC210FD	106.00	100	W38
12	TP212FD	TC212FD	126.00	200	W41
14	TP214FD	TC214FD	136.00	200	W44
16	TP216FD	TC216FD	146.00	200	W47
18	TP218FD	TC218FD	156.00	200	W50
20	TP220FD	TC220FD	166.00	200	W53
	Mains—Fusible Switch				
4	TP204SFD	TC204SFD	$88.00	60	W26
6	TP206SFD	TC206SFD	108.00	100	W32
8	TP208SFD	TC208SFD	118.00	100	W35
10	TP210SFD	TC210SFD	128.00	100	W38
12	TP212SFD	TC212SFD	160.00	200	W41
14	TP214SFD	TC214SFD	170.00	200	W44
16	TP216SFD	TC216SFD	190.00	200	W47
18	TP218SFD	TC218SFD	200.00	200	W50
20	TP220SFD	TC220SFD	210.00	200	W53

	Mains—Lugs Only				
4	TP204L	TC204L	$42.00	60	W17
6	TP206L	TC206L	52.00	100	W20
8	TP208L	TC208L	62.00	100	W23
10	TP210L	TC210L	72.00	100	W26
12	TP212L	TC212L	82.00	200	W29
14	TP214L	TC214L	94.00	200	W32
16	TP216L	TC216L	104.00	200	W35
18	TP218L	TC218L	114.00	200	W38
20	TP220L	TC220L	124.00	200	W41
	Mains—Safety Fuse				
4	TP204F	TC204F	$58.00	60	W26
6	TP206F	TC206F	70.00	100	W32
8	TP208F	TC208F	80.00	100	W35
10	TP210F	TC210F	90.00	100	W38
12	TP212F	TC212F	110.00	200	W41
14	TP214F	TC214F	120.00	200	W44
16	TP216F	TC216F	130.00	200	W47
18	TP218F	TC218F	140.00	200	W50
20	TP220F	TC220F	150.00	200	W53
	Mains—Fusible Switch				
4	TP204SF	TC204SF	$72.00	60	W26
6	TP206SF	TC206SF	92.00	100	W32
8	TP208SF	TC208SF	102.00	100	W35
10	TP210SF	TC210SF	112.00	100	W38
12	TP212SF	TC212SF	144.00	200	W41
14	TP214SF	TC214SF	154.00	200	W44
16	TP216SF	TC216SF	174.00	200	W47
18	TP218SF	TC218SF	184.00	200	W50
20	TP220SF	TC220SF	194.00	200	W53

For Superba Type Double Door Panels, add S to Cat. No., e.g., SNTP304LD.

Bull Dog Lighting Panelboards

Using Overcurrent Protective Device in 1 Leg Only

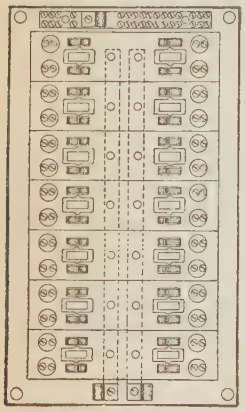
Solid Neutral Bar in Other

Mains: 4-Wire, 3-Phase, 125-250 Volts
Branches: 2-Wire, 125 Volts, Single Pole

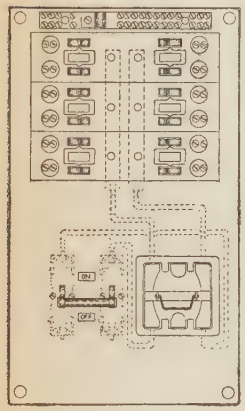
Branches, single pole or double pole toggle switches and 30-ampere plug or cartridge type fuse connections.

Cabinet dimensions, 20 inches wide, 5½ inches deep. Numeral in Box No. indicates height in inches. Wiring gutters, 4 inches.

Cat. Nos. and prices include panel (less fuses) and cabinets complete.



Style NTP3LD



Style NTP-SFD

Double Door
30-Amp. Tumbler Switches, Plug Fuses
30-Amp. Tumbler Switches, Cartridge Fuses
Mains—Lugs Only

No. Circuits	Cat. Nos. Plug Fuses	Cat. Nos. Cartridge Fuses	Each	Amp. Mains	Box No.
4	NTP404LD	NTC404LD	$52.00	30	W17
8	NTP408LD	NTC408LD	64.00	60	W20
12	NTP412LD	NTC412LD	74.00	60	W23
16	NTP416LD	NTC416LD	90.00	60	W26
20	NTP420LD	NTC420LD	100.00	60	W29
24	NTP424LD	NTC424LD	112.00	60	W32
28	NTP428LD	NTC428LD	122.00	100	W35
32	NTP432LD	NTC432LD	132.00	100	W38
36	NTP436LD	NTC436LD	154.00	100	W44
40	NTP440LD	NTC440LD	164.00	100	W47
	Mains—Safety Fuse				
4	NTP404FD	NTC404FD	$66.00	30	W26
8	NTP408FD	NTC408FD	78.00	60	W29
12	NTP412FD	NTC412FD	90.00	60	W32
16	NTP416FD	NTC416FD	108.00	60	W35
20	NTP420FD	NTC420FD	120.00	60	W38
24	NTP424FD	NTC424FD	132.00	60	W41
28	NTP428FD	NTC428FD	144.00	100	W44
32	NTP432FD	NTC432FD	160.00	100	W47
36	NTP436FD	NTC436FD	180.00	100	W53
40	NTP440FD	NTC440FD	194.00	100	W56
	Mains—Fusible Switch				
4	NTP404SFD	NTC404SFD	$88.00	30	W35
8	NTP408SFD	NTC408SFD	100.00	60	W38
12	NTP412SFD	NTC412SFD	112.00	60	W41
16	NTP416SFD	NTC416SFD	134.00	60	W44
20	NTP420SFD	NTC420SFD	148.00	60	W47
24	NTP424SFD	NTC424SFD	160.00	60	W50
28	NTP428SFD	NTC428SFD	174.00	100	W53
32	NTP432SFD	NTC432SFD	188.00	100	W56
36	NTP436SFD	NTC436SFD	234.00	100	W62
40	NTP440SFD	NTC440SFD	246.00	100	W65

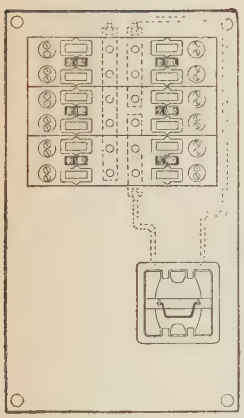
Single Door
30-Amp. Tumbler Switches, Plug Fuses
30-Amp. Tumbler Switches, Cartridge Fuses
Mains—Lugs Only

Cat. Nos. Plug Fuses	Cat. Nos. Cartridge Fuses	Each	Amp. Mains	Box No.
NTP404L	NTC404L	$40.00	30	W17
NTP408L	NTC408L	52.00	60	W20
NTP412L	NTC412L	62.00	60	W23
NTP416L	NTC416L	78.00	60	W26
NTP420L	NTC420L	88.00	60	W29
NTP424L	NTC424L	100.00	60	W32
NTP428L	NTC428L	110.00	100	W35
NTP432L	NTC432L	120.00	100	W38
NTP436L	NTC436L	146.00	100	W44
NTP440L	NTC440L	156.00	100	W47
Mains—Safety Fuse				
NTP404F	NTC404F	$54.00	30	W26
NTP408F	NTC408F	66.00	60	W29
NTP412F	NTC412F	78.00	60	W32
NTP416F	NTC416F	96.00	60	W35
NTP420F	NTC420F	108.00	60	W38
NTP424F	NTC424F	120.00	60	W41
NTP428F	NTC428F	132.00	100	W44
NTP432F	NTC432F	148.00	100	W47
NTP436F	NTC436F	170.00	100	W53
NTP440F	NTC440F	182.00	100	W56
Mains—Fusible Switch				
NTP404SF	NTC404SF	$76.00	30	W35
NTP408SF	NTC408SF	88.00	60	W38
NTP412SF	NTC412SF	100.00	60	W41
NTP416SF	NTC416SF	122.00	60	W44
NTP420SF	NTC420SF	136.00	60	W47
NTP424SF	NTC424SF	148.00	60	W50
NTP428SF	NTC428SF	162.00	100	W53
NTP432SF	NTC432SF	176.00	100	W56
NTP436SF	NTC436SF	222.00	100	W62
NTP440SF	NTC440SF	234.00	100	W65

Using Overcurrent Protective Devices in Both Legs

No Neutral Bar

Mains: 3-Wire, 125-250 Volts
Branches: 2-Wire, 125 Volts, Double Pole



Style TP3FD

	Mains—Lugs Only				
4	TP304LD	TC304LD	$58.00	30	W17
6	TP306LD	TC306LD	68.00	60	W20
8	TP308LD	TC308LD	78.00	60	W23
10	TP310LD	TC310LD	88.00	60	W26
12	TP312LD	TC312LD	98.00	60	W29
14	TP314LD	TC314LD	106.00	100	W32
16	TP316LD	TC316LD	116.00	100	W35
18	TP318LD	TC318LD	126.00	100	W38
20	TP320LD	TC320LD	140.00	100	W41
	Mains—Safety Fuse				
4	TP304FD	TC304FD	$68.00	30	W26
6	TP306FD	TC306FD	78.00	60	W29
8	TP308FD	TC308FD	88.00	60	W32
10	TP310FD	TC310FD	98.00	60	W35
12	TP312FD	TC312FD	108.00	60	W38
14	TP314FD	TC314FD	128.00	100	W44
16	TP316FD	TC316FD	138.00	100	W47
18	TP318FD	TC318FD	148.00	100	W50
20	TP320FD	TC320FD	158.00	100	W53
	Mains—Fusible Switch				
4	TP304SFD	TC304SFD	$86.00	30	W26
6	TP306SFD	TC306SFD	96.00	60	W29
8	TP308SFD	TC308SFD	106.00	60	W32
10	TP310SFD	TC310SFD	116.00	60	W35
12	TP312SFD	TC312SFD	126.00	60	W38
14	TP314SFD	TC314SFD	146.00	100	W44
16	TP316SFD	TC316SFD	156.00	100	W47
18	TP318SFD	TC318SFD	166.00	100	W50
20	TP320SFD	TC320SFD	182.00	100	W53

	Mains—Lugs Only				
TP304L	TC304L	$38.00	30	W17
TP306L	TC306L	48.00	60	W20
TP308L	TC308L	58.00	60	W23
TP310L	TC310L	68.00	60	W26
TP312L	TC312L	78.00	60	W29
TP314L	TC314L	90.00	100	W32
TP316L	TC316L	100.00	100	W35
TP318L	TC318L	110.00	100	W38
TP320L	TC320L	124.00	100	W41
	Mains—Safety Fuse			
TP304F	TP304F	$52.00	30	W26
TP306F	TP306F	62.00	60	W29
TP308F	TP308F	72.00	60	W32
TP310F	TP310F	82.00	60	W35
TP312F	TP312F	92.00	60	W38
TP314F	TP314F	112.00	100	W44
TP316F	TP316F	122.00	100	W47
TP318F	TP318F	132.00	100	W50
TP320F	TP320F	142.00	100	W53
	Mains—Fusible Switch			
TP304SF	TC304SF	$70.00	30	W26
TP306SF	TC306SF	80.00	60	W29
TP308SF	TC308SF	90.00	60	W32
TP310SF	TC310SF	100.00	60	W35
TP312SF	TC312SF	110.00	60	W38
TP314SF	TC314SF	130.00	100	W44
TP316SF	TC316SF	140.00	100	W47
TP318SF	TC318SF	150.00	100	W50
TP320SF	TC320SF	166.00	100	W53

For Superba Type Double Door Panels, add S to Cat. No., e.g., SNTP404LD.

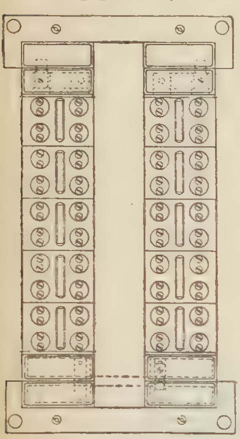
Bull Dog Lighting Panelboards

Branches: Plug Fuse Connections Only

Double Row Type

Using Plug Fuse in 1 Leg Only
Solid Neutral Bar in Other

Cabinets, 20 inches wide, 5½ inches deep.
Numerals in Box No. indicates height in inches.
Wiring gutters, 4 inches.



Style NP3L

Mains: 3-Wire, 125-250 Volts
Branches: 2-Wire, 125 Volts, Single Pole

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
	Mains—Lugs Only			
16	NP316L	$56.00	100	W23
24	NP324L	66.00	100	W26
32	NP332L	76.00	100	W29
40	NP340L	106.00	200	W35
	Mains—Safety Fuses			
8	NP308F	$60.00	60	W26
16	NP316F	80.00	100	W32
24	NP324F	90.00	100	W35
32	NP332F	105.00	100	W38
40	NP340F	136.00	200	W44
	Mains—Fusible Switch			
8	NP308SF	$74.00	60	W26
16	NP316SF	95.00	100	W32
24	NP324SF	108.00	100	W35
32	NP332SF	120.00	100	W38
40	NP340SF	166.00	200	W44

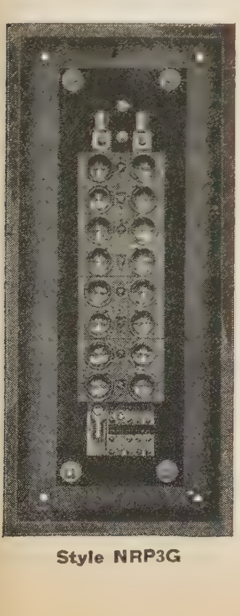
Style NP4L

Mains: 4-Wire, 3-Phase, 125-250 Volts
Branches: 2-Wire, 125 Volts Single Pole

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
	Mains—Lugs Only			
16	NP416L	$60.00	60	W26
24	NP424L	70.00	60	W29
32	NP432L	80.00	100	W32
40	NP440L	108.00	100	W35
	Mains—Safety Fuse			
8	NP408F	$70.00	30	W26
16	NP416F	84.00	60	W32
24	NP424F	94.00	60	W35
32	NP432F	110.00	100	W38
40	NP440F	140.00	100	W41
	Mains—Fusible Switch			
8	NP408SF	$82.00	30	W35
16	NP416SF	104.00	60	W41
24	NP424SF	120.00	60	W44
32	NP432SF	132.00	100	W47
40	NP440SF	176.00	100	W50

Narrow Type Panelboards

Wiring gutters, 3 inches.



Style NRP3G

Mains: 3-Wire, 125-250 Volts
Branches: 2-Wire, 125 Volts, Single Pole

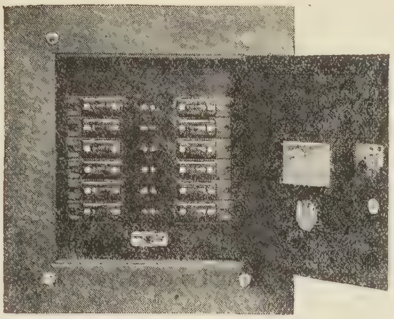
No. Cir.	Cat. No.	Each	Amp. Mains	Box Dimen. In.
	Mains—Lugs Only			
8	NRP3G08	$20.00	60	15x10½x4
12	NRP3G12	24.00	60	20x10½x4
16	NRP3G16	30.00	100	24x10½x4
20	NRP3G20	34.00	100	28x10½x4
24	NRP3G24	42.00	100	20x17½x4¼
28	NRP3G28	48.00	100	24x17½x4¼
32	NRP3G32	54.00	100	24x17½x4¼

Mains: 3-Wire, 125 Volts
Branches: 2-Wire, 125 Volts Double Pole

No. Cir.	Cat. No.	Each	Amp. Mains	Box Dimen. In.
	Mains—Lugs Only			
4	RP3G04	$16.00	30	15x10½x4
6	RP3G06	22.00	60	20x10½x4
8	RP3G08	26.00	60	24x10½x4
10	RP3G10	30.00	60	24x10½x4
12	RP3G12	34.00	60	28x10½x4
14	RP3G14	40.00	100	20x17½x4¼
16	RP3G16	44.00	100	20x17½x4¼
18	RP3G18	50.00	100	24x17½x4¼
20	RP3G20	54.00	100	24x17½x4¼

Bull Dog Lighting Panelboards

Circuit Breaker Type



No. NA1B312L with Main Lugs

These panels have circuit breakers in the branches in lieu of toggle switches and fuses.

They are adapted for use in buildings where circuits are subject to overloads which would involve much fuse replacement and where frequent switching is done at the panels.

The breakers are quick-make and quick-break with automatic overload trip and inverse-time-limit feature. They cannot be held closed against overload. The trip is automatic and self-indicating with manual reset.

Cat. Nos. listed cover 15-ampere breakers. No increase in price for 20 and 25-ampere breakers. For 35 and 50 amperes, add $1.00 for single pole and $2.00 for double pole.

Prices include panel and cabinet complete.

Solid Neutral

Mains: 3-Wire, 125-250 Volts
Branches: 2-Wire, 125 Volts, Single Pole

No. Circuits	Mains—Lugs Only Cat. No.	Each	Mains—Circuit Breaker Cat. No.	Each	Amp. Mains
4	NA1B304L	$49.00	NA1B304AB	$71.00	50
6	NA1B306L	59.00	NA1B306AB	81.00	50
8	NA1B308L	70.00	NA1B308AB	92.00	50
10	NA1B310L	81.00	NA1B310AB	103.00	50
12	NA1B312L	95.00	NA1B312AB	138.00	100
14	NA1B314L	107.00	NA1B314AB	150.00	100
16	NA1B316L	119.00	NA1B316AB	162.00	100
18	NA1B318L	131.00	NA1B318AB	174.00	100
20	NA1B320L	143.00	NA1B320AB	186.00	100
22	NA1B322L	155.00	NA1B322AB	202.00	100
24	NA1B324L	167.00	NA1B324AB	214.00	100

Mains: 4-Wire, 3-Phase, 125-250 Volts
Branches: 2-Wire, 125 Volts, Single Pole

4	NA1B404L	$51.00	NA1B404AB	$79.00	50
6	NA1B406L	62.00	NA1B406AB	90.00	50
8	NA1B408L	73.00	NA1B408AB	101.00	50
10	NA1B410L	85.00	NA1B410AB	113.00	50
12	NA1B412L	96.00	NA1B412AB	124.00	50
14	NA1B414L	108.00	NA1B414AB	136.00	50
16	NA1B416L	122.00	NA1B416AB	180.00	100
18	NA1B418L	134.00	NA1B418AB	191.00	100
20	NA1B420L	146.00	NA1B420AB	203.00	100
22	NA1B422L	158.00	NA1B422AB	219.00	100
24	NA1B424L	170.00	NA1B424AB	231.00	100

No Neutral Bar

Mains: 2-Wire, 125 Volts
Branches: 2-Wire, 125 Volts, Double Pole

4	A2B204L	$70.00	A2B204AB	$92.00	50
6	A2B206L	96.00	A2B206AB	139.00	100
8	A2B208L	120.00	A2B208AB	163.00	100
10	A2B210L	146.00	A2B210AB	189.00	100
12	A2B212L	174.00	A2B212AB	284.00	200
14	A2B214L	200.00	A2B214AB	310.00	200
16	A2B216L	226.00	A2B216AB	336.00	200
18	A2B218L	256.00	A2B218AB	362.00	200
20	A2B220L	282.00	A2B220AB	388.00	200

Mains: 3-Wire, 125-250 Volts
Branches: 2-Wire, 125 Volts, Double Pole

4	A2B304L	$72.00	A2B304AB	$100.00	50
6	A2B306L	95.00	A2B306AB	123.00	50
8	A2B308L	119.00	A2B308AB	147.00	50
10	A2B310L	143.00	A2B310AB	171.00	50
12	A2B312L	172.00	A2B312AB	230.00	100
14	A2B314L	196.00	A2B314AB	258.00	100
16	A2B316L	222.00	A2B316AB	282.00	100
18	A2B318L	251.00	A2B318AB	308.00	100
20	A2B320L	277.00	A2B320AB	344.00	100

Benjamin Panelboards and Cabinets

Benjamin Panelboards are easily and economically installed and incorporate features that insure low maintenance and efficiency in operation. A particularly advantageous feature of these panelboards is that all parts are removable from the front. They are compact and well proportioned and thus add to the appearance of any wiring installation.

Features of Benjamin Panelboards

Bases.—Molded composition, strong, fireproof, of high dielectric strength and unaffected by heat, moisture, oil or acids.

Panel.—Indestructible in that molded base units are mounted on steel back. Barriers and switch plates are of steel.

Switches.—Single pole, 125-volt, and double pole, 250-volt, tumbler type are 30-ampere heavy duty with quick break and make mechanism.

Switch Plates.—Individual for each 4-branch circuit on 1-fuse panels; 2-fuse panels have individual switch plates for each pair of branch circuits.

Capacity.—All current carrying parts are based on maximum current tensity of 1000 amperes per square inch cross section.

Main Connections.—Furnished in 30, 60, 100 and 200 amperes capacity in 4 standard types: Main Lugs Only, Fusible Only, Fusible Main Knife Switches and Fusible Main Brush Switches.

Types of Panelboards

Safety Type.—The cabinet for this panel is of the door-in-door construction, the large door giving access to mains and branch fuses, and small door to branch switches only. Large door is equipped with Yale lock and key and small door with latch only.

This type of panel is recommended for installations where branch circuit switches are manipulated by inexperienced persons and where it is desired to keep fuses under lock and key.

Protective Type.—This type panel has a dead front protective shield covering the face of the panel which prevents accidental contact with any live part while changing fuses or operating switches. The cabinets have a single door with a combined spring latch and knob and a Yale lock.

Cabinets for panels having Fusible Main Knife switch have 2 doors: 1 door for the knife switch and the other for the branch fuses.

Panels with Fusible Mains have a small door in the protective shield, giving access to the main fuses.

Open Type.—This type panel is identical to the Safety Type.except that it has a single door which gives access to all the fuses and switches on the face of the panel. This panel is recommended for installations where the manipulation of switches and the renewal of fuses are attended to by authorized persons. Equipped with combined Yale lock, latch and knob.

Type NLPT

1-Fuse Panels

These Panels are polarity type with a solid neutral bar to which the grounded conductors of the branch circuits are attached.

Panels and cabinets can be furnished in the types listed below:

Safety Type

Type NSPT. Branches, 30-ampere, 125-volt single pole tumbler switches, for plug fuses; mains, 125–250-volt.

Protective Type

Type NLPT.—Branches, 30-ampere, 125-volt single pole tumbler switches, for plug fuses; mains, 125–250-volt.

2-Fuse Panels

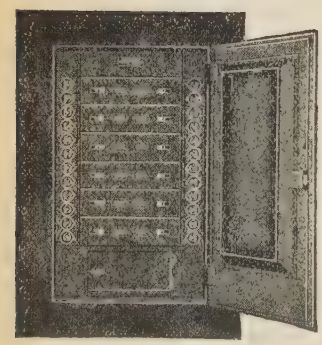
Safety Type

These panels are arranged for 2 fuses for each 2-wire branch circuit.

Panels and cabinets can be furnished in the types listed below.

Type SPT, 2-2-Wire.—Branches, 30-ampere, 250-volt double pole tumbler switches, for plug fuses; mains 125-volt.

Type SPT, 3-2-Wire.—Branches, 30-ampere, 250-volt double pole tumbler switches, for plug fuses; mains, 125–250-volt.



Type SPT

Protective Type

Type LPT, 2-2-Wire.—Branches, 30-ampere, 250-volt double pole tumbler switches, for plug fuses; mains, 125-volt.

Type LPT, 3-2-Wire.—Branches, 30-ampere, 250-volt double pole switches, for plug fuses; mains, 125–250-volt.

Open Type

Type OCT, 2-2-Wire.—Branches, 30-ampere, 250-volt double pole tumbler switches for cartridge fuses; mains, 125-volt.

Type OCT, 3-2-Wire.—Branches, 30-ampere, 250-volt double pole tumbler switches, for cartridge fuses; mains, 125–250-volt.

Type OPK, 2-2-Wire.—Branches, 30-ampere, knife switch, for plug fuses; mains, 125-volt.

Type OPK, 3-2-Wire.—Branches, 30-ampere, knife switch, for plug fuses; mains, 125–250-volt.

Benjamin Little Sentry Panel Boards with Cabinets

For Residences, Apartment Buildings, Small Stores, Schools, Small Factories and Similar Places Having from 4 to 12 Branch Circuits

Little Sentry Panels are ready for installations. Require no preliminary labor or adjustment. Trim, panel and fuse receptacles can all be removed from the front. Wiring terminal of fuse receptacle is one piece and is held in place by two small bolts. Contact is made with the entire base of the fuse shell.

Safety is assured the user because a protective shield covers all live metal parts.

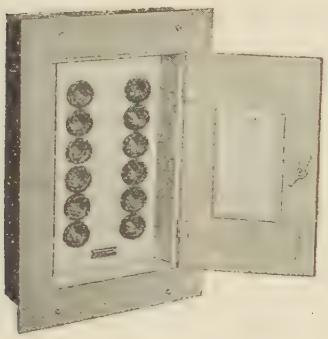
The following features make easy installation of Little Sentry Panels:

Panel is easily removed by a quarter turn of 4 screws.

Each neutral branch connection is opposite fuse for that circuit simplifying the tracing of circuits.

Fuse receptacles easily removed from panel without disturbing wiring.

Blown fuse can easily be located. The slot in the receptacle base makes it simple and safe to use a test lamp.



Type NP Little Sentry Panels with Cabinets

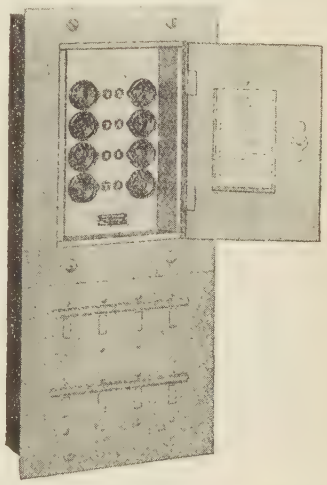
For 3-Wire Service

Mains: 125–250-Volt

1-Fuse Branches

Branches: Arranged for Plug Fuses Only

Cat. No.	No. of Circuits	Box Dimensions, Inches Outside Width	Outside Height	Inside Depth	Approx. Weight Pounds	Price Each
66104	4	9½	9½	3½	15	$6.30
66106	6	9½	11	3½	17	9.00
66108	8	9½	12½	3½	19	10.80
66110	10	9½	14	3½	21	12.60
66112	12	9½	15½	3½	23	14.40



Type NEP Little Sentry Panels with Cabinets

Arranged with Switch Plates

For 3-Wire Service

Mains: 125-250-Volt, 1-Fuse Branches

Branches: 125-Volt, Arranged for Plug Fuses

Cat. No.	No. of Circuits	No. of Switch Mountings	Box Dimensions, Inches Outside Width	Outside Height	Inside Depth	Approx. Weight Pounds	Price Each
66304	4	4	9½	15½	3½	16	$8.60
66306	6	8	9½	20	3½	18	12.50
66308	8	8	9½	21½	3½	20	15.50
66310	10	12	9½	27½	3½	23	20.00
66312	12	12	9½	29	3½	24	23.20

Type P Little Sentry Panels with Cabinets

For 3 and 2-Wire Service

Mains: 125–250-Volt 3-Wire; 125-Volt 2-Wire

2-Fuse Branches

Branches: Arranged for Plug Fuses Only

Cat. No.	No. of Circuits	Box Dimensions, Inches Outside Width	Outside Height	Inside Depth	Approx. Weight Pounds	Price Each
66204	4	9½	12½	3½	19	$9.00
66206	6	9½	15½	3½	23	13.50
66208	8	9½	18½	3½	26	16.20
66210	10	9½	21½	3½	29	18.90
66212	12	9½	24½	3½	34	22.50

Type EP Little Sentry Panels with Cabinets

Arranged with Switch Plates

For 3 and 2-Wire Service

Mains: 125-250-Volt 3 Wire; 125-Volt 2 Wire; 2-Fuse Branches

Branches: 125-Volt, Arranged for Plug Fuses

Cat. No.	No. of Circuits	No. of Switch Mountings	Box Dimensions, Inches Outside Width	Outside Height	Inside Depth	Weight Pounds	Price Each
66404	4	4	9½	18½	3½	20	$12.50
66406	6	8	9½	24½	3½	24	18.50
66408	8	8	9½	27½	3½	27	23.20
66410	10	12	9½	35	3½	31	26.40
66412	12	12	9½	38	3½	36	30.50

Benjamin Panel Boards and Cabinets

Type NPG Panels with Cabinets

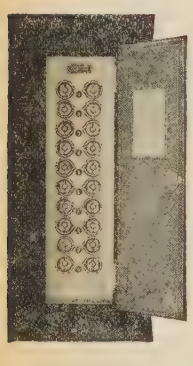
3-Wire Service—1-Fuse Branches

Mains: 125-250-Volt

Branches: 125-Volt Arranged for Plug Fuses Only

No. of Cir.	Panel with Cabinet Surface Mfrs. No.	Panel with Cabinet Flush Mfrs. No.	Gutter Space Inches	Box Dimensions, Inches: Wide Outside	High Outside	Deep Inside	Shipping Weight Pounds	Price Each
4	60104	60154	3	11½	13½	3¾	22	$16.00
6	60106	60156	3	11½	15	3¾	27	18.00
8	60108	60158	3	11½	16½	3¾	32	20.00
10	60110	60160	3	11½	18	3¾	37	22.00
12	60112	60162	3	11½	19½	3¾	42	24.00
14	60114	60164	3	11½	21	3¾	47	27.00
16	60116	60166	3	11½	22½	3¾	52	30.00
18	60118	60168	3	11½	24	3¾	57	32.00
20	60120	60170	3	11½	25½	3¾	62	34.00

Type PG Panels with Cabinets



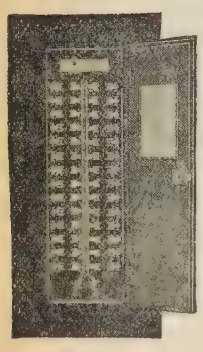
2 and 3-Wire Service—2-Fuse Branches

Mains: 125-250-Volt 3-Wire, 125-Volt 2-Wire

Branches: 125-Volt Arranged for Plug Fuses Only

No. of Cir.	Panel with Cabinet Surface Mfrs. No.	Panel with Cabinet Flush Mfrs. No.	Gutter Space Inches	Box Dimensions, Inches: Wide Outside	High Outside	Deep Inside	Shipping Weight Pounds	Price Each
4	60204	60254	3	11½	16½	3¾	17	$16.00
6	60206	60256	3	11½	19½	3¾	20	22.00
8	60208	60258	3	11½	22½	3¾	22	26.00
10	60210	60260	3	11½	25½	3¾	24	30.00
12	60212	60262	3	11½	28½	3¾	27	34.00
14	60214	60264	3	11½	31½	3¾	30	40.00
16	60216	60266	3	11½	34½	3¾	32	44.00
18	60218	60268	3	11½	37½	3¾	34	50.00
20	60220	60270	3	11½	40½	3¾	37	54.00

Type NCG Panels with Cabinets



3-Wire Service—1-Fuse Branches

Mains: 125-250-Volt

Branches: 125-Volt Arranged for Cartridge Fuses Only

No. of Cir.	Panel with Cabinet Surface Mfrs. No.	Panel with Cabinet Flush Mfrs. No.	Gutter Space Inches	Box Dimensions, Inches: Wide Outside	High Outside	Deep Inside	Shipping Weight Pounds	Price Each
4	60304	60354	3	13¾	15½	3¾	24	$17.00
6	60306	60356	3	13¾	17	3¾	30	19.50
8	60308	60358	3	13¾	18½	3¾	35	22.00
10	60310	60360	3	13¾	20	3¾	41	24.00
12	60312	60362	3	13¾	21½	3¾	46	26.00
14	60314	60364	3	13¾	23	3¾	52	29.50
16	60316	60366	3	13¾	24½	3¾	57	33.00
18	60318	60368	3	13¾	26	3¾	63	35.00
20	60320	60370	3	13¾	27½	3¾	68	37.00

Type CG Panels with Cabinets

2 and 3-Wire Service—2-Fuse Branches

Mains: 125-250-Volt 3-Wire, 125-Volt 2-Wire

Branches: 125-250-Volt Arranged for Cartridge Fuses Only

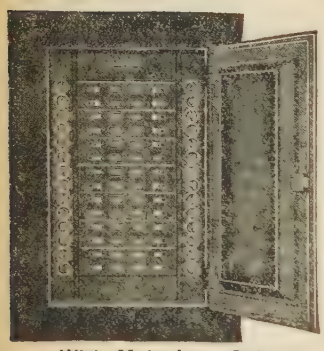
No. of Cir.	Panel with Cabinet Surface Mfrs. No.	Panel with Cabinet Flush Mfrs. No.	Gutter Space Inches	Box Dimensions, Inches: Wide Outside	High Outside	Deep Inside	Shipping Weight Pounds	Price Each
4	60404	60454	3	13¾	18½	3¾	19	$17.00
6	60406	60456	3	13¾	21½	3¾	22	24.00
8	60408	60458	3	13¾	24½	3¾	24	28.00
10	60410	60460	3	13¾	27½	3¾	26	32.00
12	60412	60462	3	13¾	30½	3¾	30	36.00
14	60414	60464	3	13¾	33½	3¾	33	43.00
16	60416	60466	3	13¾	36½	3¾	35	47.00
18	60418	60468	3	13¾	39½	3¾	37	50.00
20	60420	60470	3	13¾	42½	3¾	41	57.00

Benjamin Type NSPT Safety Panels and Type NLPT Protective Panels with Cabinets

3-Wire Mains, 1-Fuse Branches

Branches: 2-Wire; 30-Ampere, 250-Volt Heavy Duty Tumbler Switches; Plug Fuses Mains; 125-250-Volt

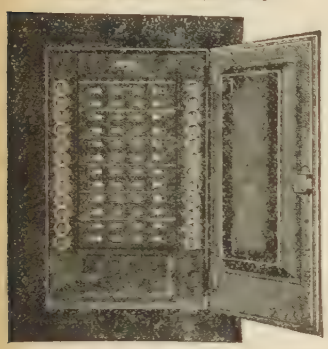
Panels with Main Lugs Only



With Main Lugs Only

No. of Circuits	Door-in-Door Cabinet Panel with Cabinet Surface Cat. No.	Flush Cat. No.	Each	†Single Door Cabinet Panel with Cabinet Surface Cat. No.	Flush Cat. No.	Each	Capacity of Mains Amperes	Gutter Space Inches	*Box No.	Approx. Weight Pounds
4	52004	52104	$50.00	54404	54504	$34.00	30	4	R18	90
8	52008	52108	60.00	54408	54508	40.00	60	4	R21	105
12	52012	52112	70.00	54412	54512	50.00	60	4	R24	120
16	52016	52116	86.00	54416	54516	74.00	100	4	R27	135
20	52020	52120	96.00	54420	54520	84.00	100	4	R30	150
24	52024	52124	106.00	54424	54524	94.00	100	4	R33	165
28	52028	52128	116.00	54428	54528	104.00	100	4	R36	180
32	52032	52132	126.00	54432	54532	114.00	100	4	R39	195
36	52036	52136	152.00	54436	54536	140.00	200	4	R42	210
40	52040	52140	162.00	54440	54540	150.00	200	4	R45	225

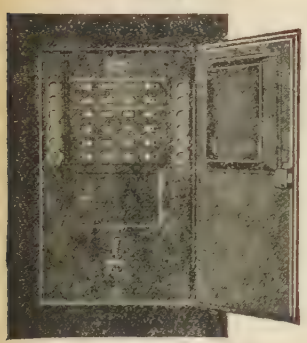
Panels with Fusible Mains



With Fusible Mains

4	52204	52304	$62.00	54604	54704	$46.00	30	4	R21	105
8	52208	52308	74.00	54608	54708	58.00	60	4	R24	120
12	52212	52312	86.00	54612	54712	70.00	60	4	R27	135
16	52216	52316	102.00	54616	54716	90.00	100	4	R36	180
20	52220	52320	114.00	54620	54720	102.00	100	4	R39	195
24	52224	52324	126.00	54624	54724	114.00	100	4	R42	210
28	52228	52328	138.00	54628	54728	126.00	100	4	R45	225
32	52232	52332	150.00	54632	54732	138.00	100	4	R48	240
36	52236	52336	178.00	54636	54736	166.00	200	4	R54	270
40	52240	52340	190.00	54640	54740	178.00	200	4	R57	285

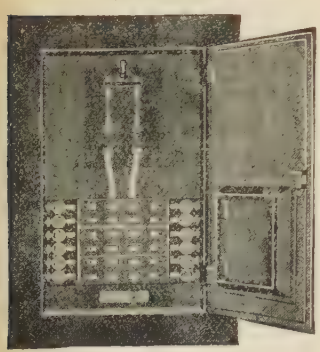
Panels with Fusible Main Brush Type Switch



With Fusible Main Brush Type Switch

4	52404	52504	$80.00	54804	54904	$64.00	30	4	R30	135
8	52408	52508	90.00	54808	54908	74.00	60	4	R33	150
12	52412	52512	102.00	54812	54912	86.00	60	4	R36	165
16	52416	52516	122.00	54816	54916	110.00	100	4	R42	195
20	52420	52520	134.00	54820	54920	122.00	100	4	R45	210
24	52424	52524	146.00	54824	54924	134.00	100	4	R48	225
28	52428	52528	158.00	54828	54928	146.00	100	4	R51	240
32	52432	52532	170.00	54832	54932	158.00	100	4	R54	255
36	52436	52536	218.00	54836	54936	206.00	200	4	V60	290
40	52440	52540	230.00	54840	54940	218.00	200	4	V63	310

Panels with Fusible Main Knife Switch



With Fusible Main Knife Switch

4	52604	52704	$80.00	55004	55104	$64.00	30	4	R27	135
8	52608	52708	90.00	55008	55108	74.00	60	4	R33	150
12	52612	52712	102.00	55012	55112	86.00	60	4	R36	165
16	52616	52716	122.00	55016	55116	110.00	100	4	R42	195
20	52620	52720	134.00	55020	55120	122.00	100	4	R45	210
24	52624	52724	146.00	55024	55124	134.00	100	4	R48	225
28	52628	52728	158.00	55028	55128	146.00	100	4	R51	240
32	52632	52732	170.00	55032	55132	158.00	100	4	R54	255
36	52636	52736	218.00	55036	55136	206.00	200	4	V60	290
40	52640	52740	230.00	55040	55140	218.00	200	4	V63	310

*Box dimensions in inches are given in complete table on one of the following pages.

†Door-in-door cabinets are illustrated, single door cabinets are identical except for door construction.

Panels with unfused main switches can be furnished at same prices as panels with fusible main switches.

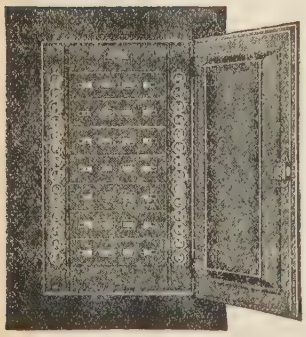
Panels arranged for cartridge fuses, but otherwise the same as panels listed on this page, will be furnished at the above prices.

Benjamin Type SPT Safety Panels with Cabinets

2-Fuse Branches—Door-in-Door Cabinet

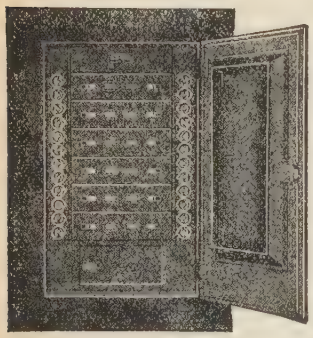
Branches: 2-Wire; 30-Ampere, 250-Volt Heavy Duty Tumbler Switches; Plug Fuses

Panels with Main Lugs Only



With Main Lugs Only

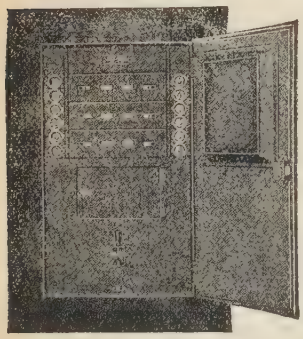
No. of Circuits	3-Wire Mains, 125-250 Volt: Panel with Cabinet Surface Cat. No.	Flush Cat. No.	Each	Capacity of Mains Amperes	*Box No.	2-Wire Mains, 125 Volt: Panel with Cabinet Surface Cat. No.	Flush Cat. No.	Each	Capacity of Mains Amperes	*Box No.
4	90404	90454	$58.00	30	R21	90004	90054	$62.00	60	R21
6	90406	90456	68.00	60	R24	90006	90056	68.00	100	R24
8	90408	90458	78.00	60	R27	90008	90058	78.00	100	R27
10	90410	90460	88.00	60	R30	90010	90060	88.00	100	R30
12	90412	90462	98.00	60	R33	90012	90062	98.00	200	R33
14	90414	90464	106.00	100	R36	90014	90064	110.00	200	R36
16	90416	90466	116.00	100	R39	90016	90066	120.00	200	R39
18	90418	90468	126.00	100	R42	90018	90068	130.00	200	R42
20	90420	90470	140.00	100	R45	90020	90070	140.00	200	R45



With Fusible Mains

Panels with Fusible Mains

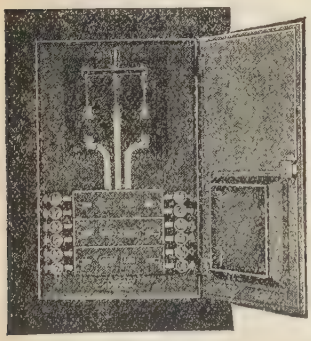
4	90804	90854	$68.00	30	R24	90104	90154	$74.00	60	R24
6	90806	90856	78.00	60	R27	90106	90156	86.00	100	R33
8	90808	90858	88.00	60	R30	90108	90158	96.00	100	R36
10	90810	90860	98.00	60	R33	90110	90160	106.00	100	R39
12	90812	90862	108.00	60	R36	90112	90162	126.00	200	R45
14	90814	90864	128.00	100	R45	90114	90164	136.00	200	R48
16	90816	90866	138.00	100	R48	90116	90166	146.00	200	R51
18	90818	90868	148.00	100	R51	90118	90168	156.00	200	R54
20	90820	90870	158.00	100	R54	90120	90170	166.00	200	R57



With Fusible Main Brush Type Switch

Panels with Fusible Main Brush Type Switch

4	90904	90954	$86.00	30	R33	90204	90254	$88.00	60	R33
6	90906	90956	96.00	60	R36	90206	90256	108.00	100	R39
8	90908	90958	106.00	60	R39	90208	90258	118.00	100	R42
10	90910	90960	116.00	60	R42	90210	90260	128.00	100	R45
12	90912	90962	126.00	60	R45	90212	90262	160.00	200	R51
14	90914	90964	146.00	100	R51	90214	90264	170.00	200	V54
16	90916	90966	156.00	100	R54	90216	90266	190.00	200	V57
18	90918	90968	166.00	100	R57	90218	90268	200.00	200	V60
20	90920	90970	182.00	100	R60	90220	90270	210.00	200	V63



With Fusible Main Knife Switch

Panels with Fusible Main Knife Switch

4	91004	91054	$86.00	30	R33	90304	90354	$88.00	60	R33
6	91006	91056	96.00	60	R36	90306	90356	108.00	100	R39
8	91008	91058	106.00	60	R39	90308	90358	118.00	100	R42
10	91010	91060	116.00	60	R42	90310	90360	128.00	100	R45
12	91012	91062	126.00	60	R45	90312	90362	160.00	200	V51
14	91014	91064	146.00	100	R51	90314	90364	170.00	200	V54
16	91016	91066	156.00	100	R54	90316	90366	190.00	200	V57
18	91018	91068	166.00	100	R57	90318	90368	200.00	200	V60
20	91020	91070	182.00	100	R60	90320	90370	210.00	200	V63

*Box dimensions in inches are given in complete table on one of the following pages.

Gutter space of all above panels is 4 inches.

Panels with unfused main switches can be furnished at same prices as panels with fusible main switches.

Note—Panels arranged for cartridge fuses, but otherwise the same as panels listed on this page, will be furnished at the above prices.

Benjamin Type LPT Protective Panels with Cabinets

2-Fuse Branches—Single Door Cabinet

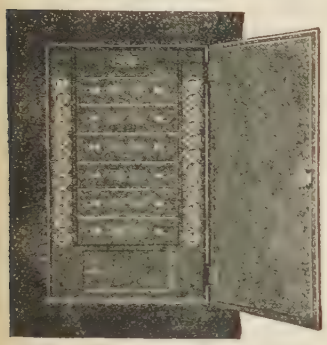
Branches: 2-Wire; 30 Ampere, 250-Volt Heavy Duty Tumbler Switches; Plug Fuses

Mains: 125-250 Volt

With Main Lugs Only

Panels with Main Lugs Only

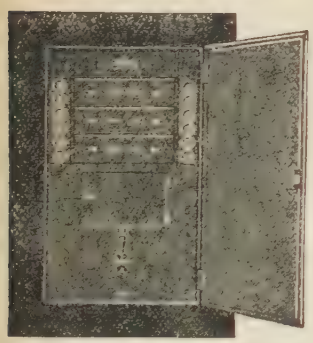
No. of Circuits	3-Wire Mains—125-250 Volt: Panel with Cabinet Surface Cat. No.	Flush Cat. No.	Each	Capacity of Mains Amperes	*Box No.	2-Wire Mains—125 Volt: Panel with Cabinet Surface Cat. No.	Flush Cat. No.	Each	Capacity of Mains Amperes	*Box No.	Approx. Weight Pounds
4	94104	94154	$38.00	30	R21	93404	93454	$42.00	60	R21	105
6	94106	94156	48.00	60	R24	93406	93456	52.00	100	R24	120
8	94108	94158	58.00	60	R27	93408	93458	62.00	100	R27	135
10	94110	94160	68.00	60	R30	93410	93460	72.00	100	R30	150
12	94112	94162	78.00	60	R33	93412	93462	82.00	200	R33	165
14	94114	94164	90.00	100	R36	93414	93464	94.00	200	R36	180
16	94116	94166	100.00	100	R39	93416	93466	104.00	200	R39	195
18	94118	94168	110.00	100	R42	93418	93468	114.00	200	R42	210
20	94120	94170	124.00	100	R45	93420	93470	124.00	200	R45	225



With Fusible Mains

Panels with Fusible Mains

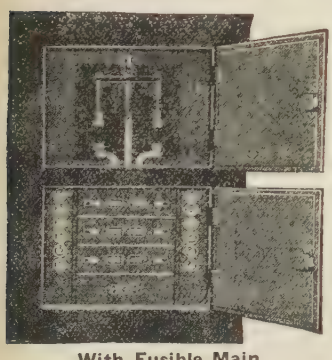
4	94204	94254	$52.00	30	R24	93804	93854	$58.00	60	R24	120
6	94206	94256	62.00	60	R27	93806	93856	70.00	100	R33	135
8	94208	94258	72.00	60	R30	93808	93858	80.00	100	R36	150
10	94210	94260	82.00	60	R33	93810	93860	90.00	100	R39	165
12	94212	94262	92.00	60	R36	93812	93862	110.00	200	R45	180
14	94214	94264	112.00	100	R45	93814	93864	120.00	200	R48	225
16	94216	94266	122.00	100	R48	93816	93866	130.00	200	R51	240
18	94218	94268	132.00	100	R51	93818	93868	140.00	200	R54	255
20	94220	94270	142.00	100	R54	93820	93870	150.00	200	R57	270



With Fusible Main Brush Type Switch

Panels with Fusible Main Brush Type Switch

4	94304	94354	$70.00	30	R33	93904	93954	$72.00	60	R33	150
6	94306	94356	80.00	60	R36	93906	93956	92.00	100	R39	165
8	94308	94358	90.00	60	R39	93908	93958	102.00	100	R42	180
10	94310	94360	100.00	60	R42	93910	93960	112.00	100	R45	195
12	94312	94362	110.00	60	R45	93912	93962	144.00	200	V51	210
14	94314	94364	130.00	100	R51	93914	93964	154.00	200	V54	240
16	94316	94366	140.00	100	R54	93916	93966	174.00	200	V57	255
18	94318	94368	150.00	100	R57	93918	93968	184.00	200	V60	270
20	94320	94370	166.00	100	R60	93920	93970	194.00	200	V63	290



With Fusible Main Knife Switch

Panels with Fusible Main Knife Switch

4	94404	94454	$70.00	30	R30	94004	94054	$72.00	60	R33	150
6	94406	94456	80.00	60	R36	94006	94056	92.00	100	R39	165
8	94408	94458	90.00	60	R39	94008	94058	102.00	100	R42	180
10	94410	94460	100.00	60	R42	94010	94060	112.00	100	R45	195
12	94412	94462	110.00	60	R45	94012	94062	144.00	200	V51	210
14	94414	94464	130.00	100	R51	94014	94064	154.00	200	V54	240
16	94416	94466	140.00	100	R54	94016	94066	174.00	200	V57	255
18	94418	94468	150.00	100	R57	94018	94068	184.00	200	V60	270
20	94420	94470	166.00	100	R60	94020	94070	194.00	200	V63	290

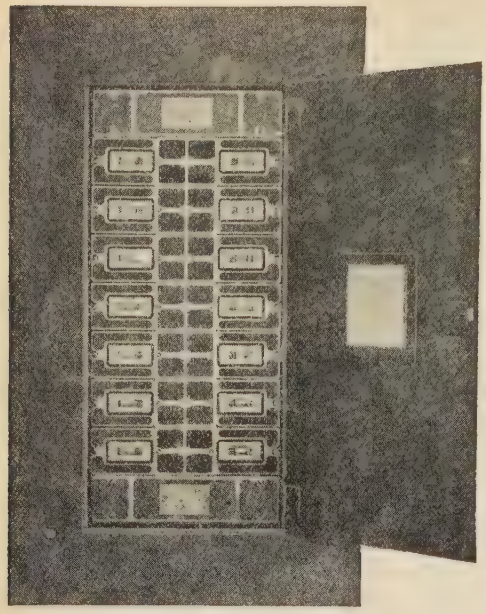
*Box dimensions in inches are given in complete table on one of the following pages.

Gutter space for above panels is 4 inches.

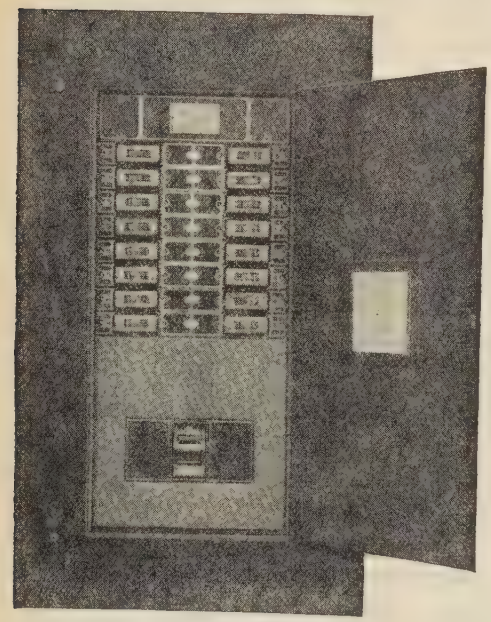
Panels with unfused main switches can be furnished at same prices as panels with fusible main switches.

Note.—Panels arranged for cartridge fuses, but otherwise the same as panels listed on this page, will be furnished at the above prices.

Benjamin Nofuse Panelboards and Cabinets



Type A2B Panelboard with Lugs in Mains



Type NA1B Panelboard with Main Circuit Breaker

List Price Additions for Increased Main Bus Capacity

For Main Lugs Only

Type of Panel	50 Amps. to 100 Amps.	Increase Box Height	50 Amps. to 200 Amps.	Increase Box Height	100 Amps. to 200 Amps.	Increase Box Height
NA1B-3-L	$4.00	None	$6.00	None	$5.00	None
A2B-2-L	4.00	None	6.00	None	5.00	None
NA2B-3-L	4.00	None	6.00	None	5.00	None
NA1B-4-L	5.00	None	8.00	None	7.00	None
A2B-3-L	5.00	None	8.00	None	7.00	None

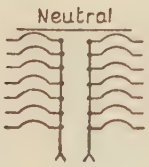
For Circuit Breaker In Mains

NA1B-3-AB	$27.00	None	$80.00	6	$60.00	6
A2B-2-AB	27.00	None	80.00	6	60.00	6
NA2B-3-AB	27.00	None	80.00	6	60.00	6
NA1B-4-AB	35.00	None	110.00	6	78.00	6
A2B-3-AB	35.00	None	110.00	6	78.00	6

Benjamin Nofuse Lighting Panelboards With Cabinets

Safety Type NA1B-3-L

Single Pole, Solid Neutral



MAINS.—125–250 volts, 3 wire solid neutral.

BRANCHES.—125 volts, 2 wire with 15* ampere, 125 volts, single pole circuit breakers.

BOXES.—Code gauge galvanized steel, 4-inch gutters.

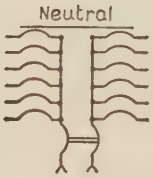
FRONTS.—Code gauge full finish steel; black finish, plush or surface type.

Main Lugs Only

No. Cir.	Panel With Cabinet	*Each	Main Amps.	Box No.	Box Dimensions, In. Width	Ht.	Depth	Ship. Wt. Lbs.
4	NA1B-304-L050	$49.00	50	C17	20	17	5½	75
6	NA1B-306-L050	59.00	50	C20	20	20	5½	86
8	NA1B-308-L050	70.00	50	C20	20	20	5½	95
10	NA1B-310-L050	81.00	50	C23	20	23	5½	101
12	NA1B-312-L100	95.00	100	C23	20	23	5½	105
14	NA1B-314-L100	107.00	100	C26	20	26	5½	112
16	NA1B-316-L100	119.00	100	C26	20	26	5½	120
18	NA1B-318-L100	131.00	100	C29	20	29	5½	127
20	NA1B-320-L100	143.00	100	C29	20	29	5½	135
22	NA1B-322-L100	155.00	100	C32	20	32	5½	142
24	NA1B-324-L100	167.00	100	C32	20	32	5½	150
26	NA1B-326-L100	179.00	100	C35	20	35	5½	155
28	NA1B-328-L100	191.00	100	C35	20	35	5½	160
30	NA1B-330-L100	203.00	100	C38	20	38	5½	179
32	NA1B-332-L100	215.00	100	C38	20	38	5½	185
34	NA1B-334-L200	238.00	200	C44	20	44	5½	200
36	NA1B-336-L200	251.00	200	C44	20	44	5½	215
38	NA1B-338-L200	264.00	200	C47	20	47	5½	222
40	NA1B-340-L200	277.00	200	C47	20	47	5½	230

Safety Type NA1B-3AB

Single Pole, Solid Neutral



MAINS.—125–250 volts, 3 wire solid neutral.

BRANCHES.—125 volts, 2 wire with 15* ampere, 125 volts, single pole circuit breakers.

BOXES.—Code gauge galvanized steel, 4-inch gutters.

FRONTS.—Code gauge, full finish steel, black finish, plush or surface type.

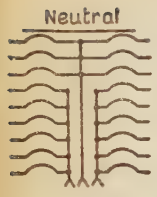
Main Circuit Breaker

No. Cir.	Panel With Cabinet	*Each	Main Amps.	Box. No.	Box Dimen. Ins. Width	Ht.	Dpth.	Ship. Wt.Lbs.
4	NA1B-304-AB050	$71.00	50	C26	20	26	5½	105
6	NA1B-306-AB050	81.00	50	C29	20	29	5½	112
8	NA1B-308-AB050	92.00	50	C29	20	29	5½	125
10	NA1B-310-AB050	103.00	50	C32	20	32	5½	130
12	NA1B-312-AB100	138.00	100	C32	20	32	5½	140
14	NA1B-314-AB100	150.00	100	C35	20	35	5½	145
16	NA1B-316-AB100	162.00	100	C35	20	35	5½	150
18	NA1B-318-AB100	174.00	100	C38	20	38	5½	160
20	NA1B-320-AB100	186.00	100	C38	20	38	5½	170
22	NA1B-322-AB100	202.00	100	C41	20	41	5½	182
24	NA1B-324-AB100	214.00	100	C41	20	41	5½	195
26	NA1B-326-AB100	226.00	100	C44	20	44	5½	202
28	NA1B-328-AB100	238.00	100	C44	20	44	5½	210
30	NA1B-330-AB100	250.00	100	C47	20	47	5½	217
32	NA1B-332-AB100	262.00	100	C47	20	47	5½	225
34	NA1B-334-AB200	345.00	200	C59	20	59	5½	255
36	NA1B-336-AB200	358.00	200	C59	20	59	5½	275
38	NA1B-338-AB200	371.00	200	C62	20	62	5½	300
40	NA1B-340-AB200	384.00	200	C62	20	62	5½	325

*Prices are based on supplying 15-ampere breakers; 20 and 25-ampere breakers can be supplied at same price except increased bus bar capacity may be required and should be added. 35 and 50-ampere breakers can be supplied at $1.00 extra per circuit, plus increased main bus bar.

Benjamin Nofuse Lighting Panelboards With Cabinets

Safety Type NA1B-4-L
Single Pole, Solid Neutral



MAINS.—125-250 volts, 3 phase, 4 wire solid neutral.

BRANCHES.—125 volts, 2 wire with 15* ampere, 125 volts, single pole circuit breakers.

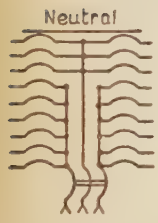
BOXES.—Code gauge galvanized steel, 4-inch gutters.

FRONTS.—Code gauge full finish steel, black finish, flush or surface type.

Main Lugs Only

No. Cir.	Panel with Cabinet	*Each	Main Amps.	Box No.	Box Dimensions, Ins. Width	Height	Depth	Ship. Wt., Lbs.
4	NA1B-404-L050	$51.00	50	C17	20	17	5½	75
6	NA1B-406-L050	62.00	50	C20	20	20	5½	86
8	NA1B-408-L050	73.00	50	C20	20	20	5½	95
10	NA1B-410-L050	85.00	50	C23	20	23	5½	101
12	NA1B-412-L050	96.00	50	C23	20	23	5½	105
14	NA1B-414-L050	108.00	50	C26	20	26	5½	112
16	NA1B-416-L100	122.00	100	C26	20	26	5½	120
18	NA1B-418-L100	134.00	100	C29	20	29	5½	127
20	NA1B-420-L100	146.00	100	C29	20	29	5½	135
22	NA1B-422-L100	158.00	100	C32	20	32	5½	142
24	NA1B-424-L100	170.00	100	C32	20	32	5½	150
26	NA1B-426-L100	182.00	100	C35	20	35	5½	155
28	NA1B-428-L100	194.00	100	C35	20	35	5½	160
30	NA1B-430-L100	206.00	100	C38	20	38	5½	179
32	NA1B-432-L100	218.00	100	C38	20	39	5½	185
34	NA1B-434-L100	238.00	100	C44	20	44	5½	200
36	NA1B-436-L100	251.00	100	C44	20	44	5½	215
38	NA1B-438-L100	264.00	100	C47	20	47	5½	222
40	NA1B-440-L100	277.00	100	C47	20	47	5½	230

Safety Type NA1B-4-AB
Single Pole, Solid Neutral



MAINS.—125-250 volts, 3 phase, 4 wire solid neutral.

BRANCHES.—125 volts, 2 wire with 15* ampere, 125 volts, single pole circuit breakers.

BOXES.—Code gauge galvanized steel, 4-inch gutters.

FRONTS.—Code gauge full finish steel, black finish steel, black finish, flush or surface type.

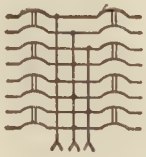
Main Circuit Breaker

No. Cir.	Panel with Cabinet	*Each	Main Amps.	Box No.	Box Dimensions, Ins. Width	Height	Depth	Ship. Wt., Lbs.
4	NA1B-404-AB050	$79.00	50	C26	20	26	5½	105
6	NA1B-406-AB050	90.00	50	C29	20	29	5½	112
8	NA1B-408-AB050	101.00	50	C29	20	29	5½	120
10	NA1B-410-AB050	113.00	50	C32	20	32	5½	133
12	NA1B-412-AB050	124.00	50	C32	20	32	5½	145
14	NA1B-414-AB050	136.00	50	C35	20	35	5½	150
16	NA1B-416-AB100	180.00	100	C35	20	35	5½	155
18	NA1B-418-AB100	191.00	100	C38	20	38	5½	165
20	NA1B-420-AB100	203.00	100	C38	20	38	5½	175
22	NA1B-422-AB100	219.00	100	C41	20	41	5½	187
24	NA1B-424-AB100	231.00	100	C41	20	41	5½	200
26	NA1B-426-AB100	243.00	100	C44	20	44	5½	207
28	NA1B-428-AB100	255.00	100	C44	20	44	5½	215
30	NA1B-430-AB100	267.00	100	C47	20	47	5½	222
32	NA1B-432-AB100	279.00	100	C47	20	47	5½	230
34	NA1B-434-AB100	296.00	100	C53	20	53	5½	243
36	NA1B-436-AB100	309.00	100	C53	20	53	5½	255
38	NA1B-438-AB100	322.00	100	C56	20	56	5½	270
40	NA1B-440-AB100	335.00	100	C56	20	56	5½	285

*List prices are based on supplying 15-ampere breakers; 20 and 25-ampere breakers can be supplied at same price except increased bus bar capacity may be required and should be added. 35 and 50-ampere breakers can be supplied at $1.00 extra per circuit, plus increased main bus bar capacity.

Benjamin Nofuse Lighting Panelboards With Cabinets

Safety Types A2B-3L and A2B-3-AB
Double Pole

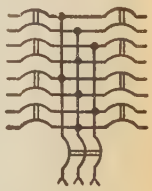


MAINS.—125-250 volts, 3 wire.

BRANCHES.—125 volts, 2 wire with 15* ampere, double pole circuit breakers.

BOXES.—Code gauge galvanized steel, 4-inch gutters.

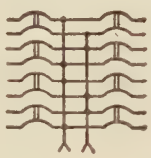
FRONTS.—Code gauge, full finish steel, black finish, flush or surface type.



Type A2B-3-L Main Lugs Only

No. Cir.	Panel with Cabinet	*Each	Main Amps.	Box No.	Box Dimensions, Ins. Width	Height	Depth	Ship. Wt., Lbs.
4	A2B-304-L050	$72.00	50	C20	20	20	5½	85
6	A2B-306-L050	95.00	50	C23	20	23	5½	95
8	A2B-308-L050	119.00	50	C26	20	26	5½	110
10	A2B-310-L050	143.00	50	C29	20	29	5½	125
12	A2B-312-L100	172.00	100	C32	20	32	5½	140
14	A2B-314-L100	196.00	100	C35	20	35	5½	150
16	A2B-316-L100	222.00	100	C38	20	38	5½	170
18	A2B-318-L100	251.00	100	C41	20	41	5½	195
20	A2B-320-L100	277.00	100	C44	20	44	5½	210
	Type A2B-3-AB Main Circuit Breaker							
4	A2B-304-AB050	$100.00	50	C29	20	29	5½	120
6	A2B-306-AB050	123.00	50	C32	20	32	5½	135
8	A2B-308-AB050	147.00	50	C35	20	35	5½	145
10	A2B-310-AB050	171.00	50	C38	20	38	5½	165
12	A2B-312-AB100	230.00	100	C41	20	41	5½	190
14	A2B-314-AB100	258.00	100	C44	20	44	5½	205
16	A2B-316-AB100	282.00	100	C47	20	47	5½	220
18	A2B-318-AB100	308.00	100	C50	20	50	5½	235
20	A2B-320-AB100	334.00	100	C53	20	53	5½	250

Safety Types A2B-2-L and A2B-2-AB
Double Pole

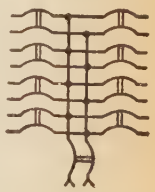


MAINS.—125 volts, 2 wire a.c. or d.c.

BRANCHES.—125 volts, 2 wire with 15* ampere, double pole circuit breakers.

BOXES.—Code gauge, galvanized steel, 4-inch gutters.

FRONTS.—Code gauge, full finish steel, black finish, flush or surface type.



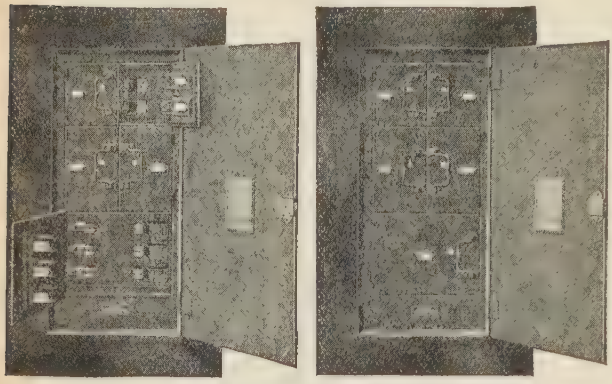
Type A2B-2-L Main Lugs Only

No. Cir.	Panel with Cabinet	Each	Main Amps.	Box No.	Box Dimensions, Ins. Width	Height	Depth	Ship. Wt., Lbs.
4	A2B-204-L050	$70.00	50	C20	20	20	5½	85
6	A2B-206-L100	96.00	100	C23	20	23	5½	95
8	A2B-208-L100	120.00	100	C26	20	26	5½	115
10	A2B-210-L100	146.00	100	C29	20	29	5½	125
12	A2B-212-L200	174.00	200	C32	20	32	5½	140
14	A2B-214-L200	200.00	200	C35	20	35	5½	155
16	A2B-216-L200	226.00	200	C38	20	38	5½	170
18	A2B-218-L200	256.00	200	C41	20	41	5½	200
20	A2B-220-L200	282.00	200	C44	20	44	5½	215
	Type A2B-2-AB Main Circuit Breaker							
4	A2B-204-AB050	$92.00	50	C29	20	29	5½	115
6	A2B-206-AB100	139.00	100	C32	20	32	5½	130
8	A2B-208-AB100	163.00	100	C35	20	35	5½	145
10	A2B-210-AB100	189.00	100	C38	20	38	5½	160
12	A2B-212-AB200	284.00	200	C47	20	47	5½	215
14	A2B-214-AB200	310.00	200	C50	20	50	5½	230
16	A2B-216-AB200	336.00	200	C53	20	53	5½	245
18	A2B-218-AB200	362.00	200	C56	20	56	5½	260
20	A2B-220-AB200	388.00	200	C59	20	59	5½	275

*List prices are based on supplying 15-ampere breakers; 20 and 25-ampere breakers can be supplied at same price, except increased bus bar capacity may be required and should be added. 35 and 50-ampere breakers can be supplied at $2.00 extra per circuit, plus increased bus bar capacity.

Benjamin Convertible Safuswitch Panelboards

Dead Front Distribution
Light and Power Panelboards and Cabinets



Base List Price

Includes Main Lugs, Bus Bars, Box and Trim
2 Wire Mains—2 Wire Branches
3 Wire Mains—3 Wire Branches
125 or 250 Volts

Branch Circuits	Main Lugs and Bus Bars 200A	400A	600A	800A	1200A
200A or less	$20.00	$30.00	$50.00	$80.00	$125.00
400A or less	......	50.00	70.00	110.00	150.00
Over 400A	......	......	100.00	150.00	190.00

Panels with 30, 60 or 100 ampere circuits only, no longer, deduct $10.00 from base price, mains not over 600 amps.

Panels may be used for 4/4 wire, 125–250 volts by adding neutral bar.

Main switch, figure as branch, be sure to include main lugs and bus bars.

3 Wire Mains—3 Wire Branches
600 Volts or Less

200A or less	$37.00	$47.00	$67.00	$93.00	$137.00
400A or less	......	69.00	87.00	124.00	162.00
Over 400A	......	......	110.00	162.00	200.00

Circuit List Price

Includes Circuit Section Complete

2 and 3 Wire 250 Volt Amp. Cap.	Complete Section Each	Space Only For Sec. Each	2 and 3 Wire 600 Volt Amp. Cap.	Complete Section Each	Space Only For Sec. Each
30–30A	$17.00	$5.80	30–30A	$37.00	$11.50
60–60A	24.00	8.75	60–60A	37.00	11.50
For One Circuit, Single Branch					
100A	$18.00	$5.75	100A	$37.00	$11.50
200A	42.00	11.50	200A	81.00	16.75
400A	97.00	16.75	400A	152.00	56.00
600A	160.00	56.00	....	......	......
Three Pole Branch Circuits for Two Circuits, Double Branch					
30–30A	$17.00	$5.80	30–30A	$48.00	$16.75
60–60A	33.00	11.50	60–60A	48.00	16.75
For One Circuit, Single Branch					
100A	$27.00	$8.35	100A	$48.00	$16.75
200A	63.00	16.75	200A	95.00	25.00
400A	146.00	25.50	400A	190.00	56.00
600A	210.00	56.00	600A	270.00	72.00

Additional Prices for Special Features

Neutral Bars

3 wire single phase 110–220 volts solid neutral service.

Cap. Main Lug.......	200A	400A	600A	800A	1200A
Add. for Panel Com. with Cabinet......	$14.00	25.00	30.00	40.00	63.00

Price includes neutral bar, main lug, lug for each branch circuit and portion of back plate, box and trim.

Sub-Feed, Through Feed or Double Lugs

4 wire, 3 phase 120–208 volts solid neutral service.

Cap. Main Lug.......	200A	400A	600A	800A	1200A
Add. for Panel Com. with Cabinet......	$12.00	24.00	36.00	48.00	60.00

Price includes lugs and portion of bus bars, back plate, box and trim that may be necessary.

Benjamin Panel Boards and Cabinets

Standard Galvanized Steel Boxes

Construction.—One piece of code gauge galvanized steel, over-lapped and riveted at corners with ¾-inch flange turned inwardly all around outside edges. This flange adds materially to the rigidity of the construction.

Gutter Space.—All boxes for standard panel boards have 4-inch gutter space.

Depth.—Standard steel boxes are made deep enough to allow ⅛-inch clear space back of panel boards and not less than ½-inch clear space between door and current carrying parts on panel boards.

Drilling and Knockouts.—Boxes will be drilled for conduits without extra charge provided complete drilling information accompanies order. This information must be available before work can be commenced. On application, data sheets for laying out box drilling dimensions will be furnished.

A sufficient number of ½ and ¾-inch knockouts are provided in top of cabinet to accommodate the total number of branch circuits supplied by the panel. One-half this number are provided in bottom of cabinet.

Flush or Surface Adaptation.—All standard steel boxes are made with flanges turned inwardly and can, therefore, be used for either flush or surface installation.

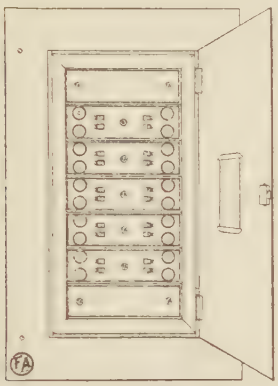
Cat. No.	Gauge No.	Box Dimensions, Inches Outside Width	Outside Height	Inside Depth	Approx. Shipping Weight Pounds	Price Each
R-18	14	24½	18	4½	23	$7.60
R-21	14	24½	21	4½	25	7.90
R-24	14	24½	24	4½	27	8.20
R-27	14	24½	27	4½	30	8.60
R-30	14	24½	30	4½	32	8.90
R-33	14	24½	33	4½	34	9.30
R-36	14	24½	36	4½	37	9.70
R-39	14	24½	39	4½	39	10.00
R-42	12	24½	42	4½	57	16.80
R-45	12	24½	45	4½	60	17.20
R-48	12	24½	48	4½	64	17.70
R-51	12	24½	51	4½	67	18.10
R-54	12	24½	54	4½	70	18.60
R-57	12	24½	57	4½	73	19.00
R-60	12	24½	60	4½	76	19.70
R-63	10	24½	63	4½	102	28.50
R-66	10	24½	66	4½	106	29.10
R-69	10	24½	69	4½	110	29.60
R-72	10	24½	72	4½	114	30.10
R-75	10	24½	75	4½	118	30.70
R-78	10	24½	78	4½	122	31.30
R-81	10	24½	81	4½	127	31.80
V-42	12	24½	42	5¼	61	17.40
V-45	12	24½	45	5¼	65	17.80
V-48	12	24½	48	5¼	68	18.30
V-51	12	24½	51	5¼	71	18.80
V-54	12	24½	54	5¼	75	19.20
V-57	12	24½	57	5¼	78	19.70
V-60	12	24½	60	5¼	81	20.40
V-63	10	24½	63	5¼	108	29.40
V-66	10	24½	66	5¼	113	30.00
V-69	10	24½	69	5¼	117	30.60
V-72	10	24½	72	5¼	121	31.10
V-75	10	24½	75	5¼	126	31.70
V-78	10	24½	78	5¼	130	32.30
V-81	10	24½	81	5¼	134	32.90

FA Panelboard and Cabinet Units

Explanation of Descriptive Catalogue Numbers

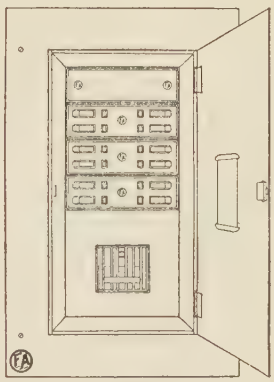
These catalogue listings were devised for your convenience and to enable us to give you better and faster service. Please note them carefully and use them in ordering.

With this method of descriptive listing your order is fully understood in all details through the various numerals and letters comprising each catalogue number. Should a clerical error be made when sending us the order the mistake will at once be noticed and inquiry made. This saves expensive shipments and a great deal of valuable time that occasionally is needlessly wasted when numerals and not descriptive listings are used.



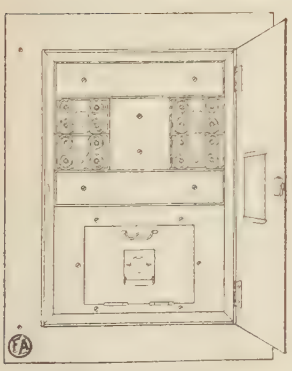
No. LNT1P20-3L100

L—Leader Type
N—Solid Neutral in Branches
T1P—1-Pole Tumbler Switch with Plug Type Fuse Conn. in Branches
20—Number of Branches
3—3-Wire Mains
L—Lugs Only for Main Connection
100—Ampere Capacity Main Bus Bar



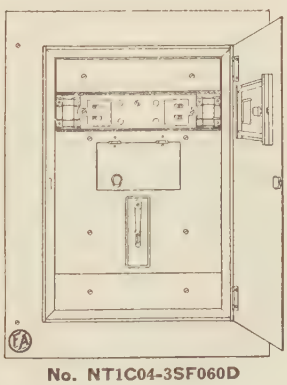
No. NA1B12-4AB050

N—Solid Neutral in Branches
A1B—Automatic 1-Pole Circuit Breaker in Branches
12—Number of Branches
4—3-Phase, 4-Wire Mains
AB—Main Automatic Circuit Breaker
050—Ampere Capacity Main Bus Bar and Circuit Breaker



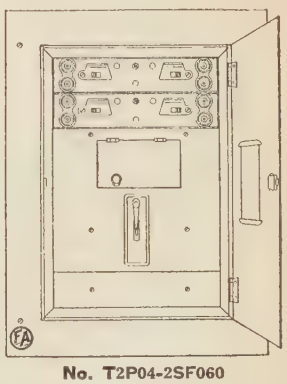
No. N1P16-3F100

N—Solid Neutral in Branches
1P—1-Pole Plug Type Fuse Conn. in Branches
16—Number of Branches
3—3-Wire Mains
F—Switchfuz Safety Type Main Fuse Disconnect
100—Ampere Capacity Main Bus Bar and Fuse Disconnect



No. NT1C04-3SF060D

N—Solid Neutral in Branches
T1C—1-Pole Tumbler Switch with Cartridge Type Fuse Conn. in Branches
04—Number of Branches
3—3-Wire Mains
SF—Safety Type Fuslok Main Switch
060—Ampere Capacity Main Bus Bar and Switch
D—Door in Door Construction Front



No. T2P04-2SF060

T2P—2-Pole Tumbler Switch with Plug Type Fuse Conn. in Branches
04—Number of Branches
2—2-Wire Mains
SF—Safety Type Fuslok Main Switch
060—Ampere Capacity Main Bus Bar and Switch

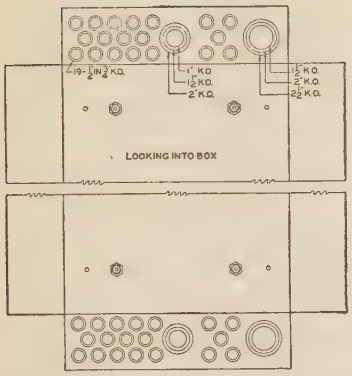
FA Panelboard Boxes

Standard Knockout Arrangement

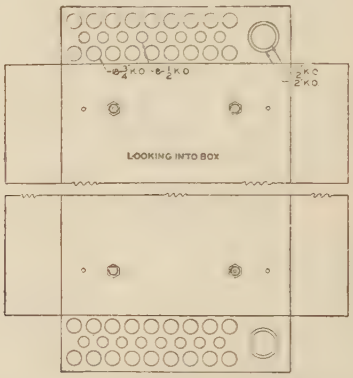
Boxes will always be shipped with standard knockouts unless special drilling template for each box is sent with order.

For quick delivery, order boxes with standard knockouts. These knockouts will fill the majority of your requirements as satisfactorily as special drillings. Avoid delay in your own office and save the expense of making out special templates by using standard knockouts.

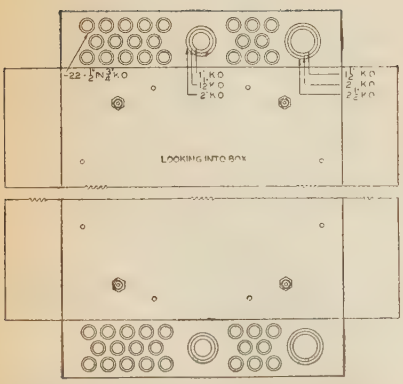
All box dimensions are inside measurements.



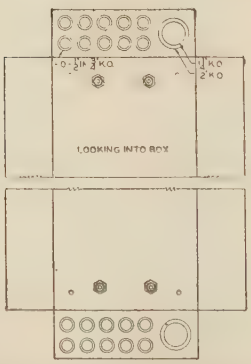
Types LNT1P, NA1B, A2B and NA2B Panelboard Boxes made of No. 12 gauge steel or less, 19 in. wide, 60 in. maximum height, 4¾ in. deep



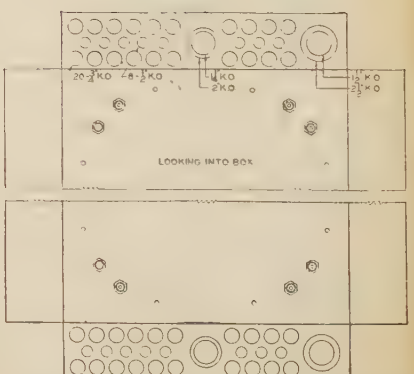
Types LNT1P, NA1B, A2B and NA2B Panelboard Boxes made of No. 10 gauge steel, 19 in. wide, any height, 4¾ in. deep



Types N1P, 2P, T2P and NT1C Panelboard Boxes made of No. 12 gauge steel or less, 23½ in. wide, 60 in. maximum height, 4¾ in. deep



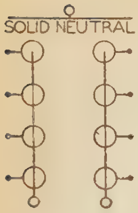
Types R3G and NR3G Panelboard Boxes made of No. 12 gauge steel or less, 12 in. wide, 60 in. maximum height, 4 in. deep



Types N1P, 2P, T2P and NT1C Panelboard Boxes made of No. 10 gauge steel, 23½ in. wide, any height, 4¾ in. deep

FA Enclosed Cutouts

Type FBX Safety Type Fuzboxes, One Fuse Type



BASE— Made of moulded material.

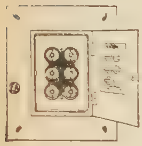
BRANCHES— 30 Amp., S. P., N. E. C. Plug Type Fuse Connections for 125 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 2 or 3 Wire, 125-250 Volt, Lugs only.

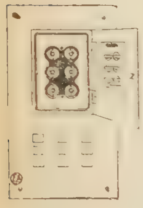
BOX— Code Thickness Galvanized Steel, 1½″ Gutters.

FRONT— Code Thickness Furniture Steel. Rust-proof and White Finish for Flush Mounting. Black Finish if Surface is ordered.

Flush units can be furnished in grey or black, if so ordered, at no extra charge.



Branches	Amperes Main Bus Bar	Inside Dimensions of Box: Wide	High	Deep	Complete Fuzbox: Catalogue Number	Each: Std. Pkg.	Less Std. Pkg.	Std. Pkg. Qty	Approx. Wt. Lbs. Std. Pkg.
4	30	7½	8	2¾	FBX4	$3.00	$3.30	5	30
6	40	7½	9½	2¾	FBX6	5.00	5.50	5	40
8	60	7½	13¾	2¾	FBX8	7.50	8.30	2	24
10	60	7½	15¼	2¾	FBX10	11.00	12.20	2	28
12	60	7½	16¾	2¾	FBX12	15.00	16.60	2	32



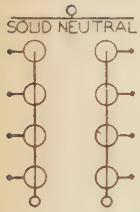
Type FBXS Safety Type Fuzboxes, One Fuse Type

With Provisions for Tumbler Switches (Switches not Included)

4	30	7½	13¾	2¾	FBXS4	$6.50	$7.20	5	70
6	40	7½	15¼	2¾	FBXS6	9.00	10.00	5	80
8	60	7½	19½	2¾	FBXS8	12.00	13.30	2	34
10	60	7½	21	2¾	FBXS10	15.00	16.60	2	40
12	60	7½	22½	2¾	FBXS12	18.00	20.00	2	46

FA Residence Type Panelboards and Cabinets

Safety Type NR Panelboards and Cabinets, One Fuse Type



PANELBOARD— Made of sections of moulded material.

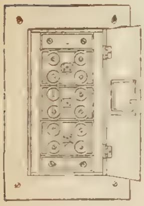
BRANCHES— 30 Amp., S. P. N. E. C. Plug Type Fuse Connections for 125 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 2 or 3 Wire, 125-250 Volt, Lugs only.

BOX - Code Thickness Galvanized Steel, 3½″ Deep, 1½″ Gutters.

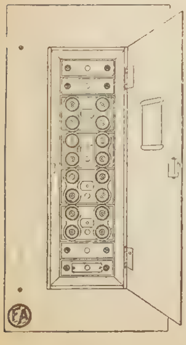
FRONT— Code Thickness Furniture Steel. Rust-proof and White Finish for Flush Mounting. Black Finish if Surface is ordered.

Flush units can be furnished in grey or black, if so ordered, at no extra charge.



Branches	Amperes Main Bus Bar	Inside Dimensions of Box: Wide	High	Combination of Panelboard Box and Front: Catalogue Number	Each	Approx. Wt., Lbs.
4	30	9	6	NR4	$6.30	8
6	40	9	9	NR6	9.00	12
8	60	9	12	NR8	10.80	15
10	60	9	15	NR10	13.50	19
12	60	9	15	NR12	18.50	19

Safety Type NR3G Panelboards and Cabinets, One Fuse Type



PANELBOARD— Made of sections of moulded material.

BRANCHES— 30 Amp., S. P. N. E. C. Plug Type Fuse Connections for 125 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 2 or 3 Wire, 125-250 Volts, Cable Lugs only.

BOX— Code Thickness Galvanized Steel, 4″ Deep, 3″ Gutters.

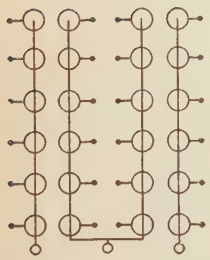
FRONT Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

4	60	12	13½	NR3G04	$16.00	20
8	60	12	16½	NR3G08	20.00	25
12	60	12	19½	NR3G12	24.00	35
16	100	12	25½	NR3G16	30.00	45
20	100	12	28½	NR3G20	34.00	50
24	100	12	34½	NR3G24§	42.00	60
28	100	12	37½	NR3G28§	48.00	65
32	100	12	40½	NR3G32§	54.00	70

§Because of narrow width cabinet, it is recommended that circuit wires be brought into junction box at ceiling and then brought down to cabinet in several large conduits.

FA Safety Type 2P-3 Panelboards and Cabinets

Fuse Only Panelboards, Two Fuse Type, One Door Construction



PANELBOARD—Made of sections of moulded material.

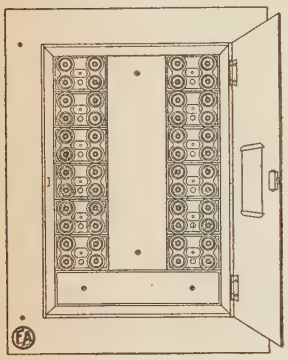
BRANCHES— 30 Amp., D. P., N. E. C. Plug Type Fuse Connections for 125 Volt, 2 Wire Circuits.

MAINS— 3 Wire, 125-250 Volt.

BOX— Code Thickness Galvanized Steel, 4¾" Deep, 4" Gutters.

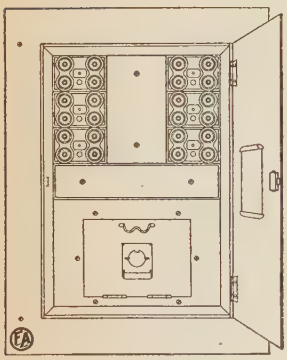
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only



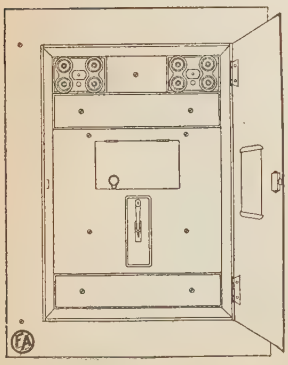
Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box—Wide	Inside Dimensions and Marking of Box—High	Combination of Panelboard Box and Front—Catalogue Number	Each	Approx. Wt., Lbs.
4	See type R3G panelboard prices.					
8	60	23½	18½	2P08-3L060	$45.00	75
12	60	23½	21½	2P12-3L060	52.00	85
16	100	23½	24½	2P16-3L100	60.00	105
20	100	23½	27½	2P20-3L100	70.00	115

Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box—Wide	Inside Dimensions and Marking of Box—High	Combination of Panelboard Box and Front—Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	24½	2P04-3F060	$54.00	85
8	60	23½	27½	2P08-3F060	62.00	90
12	60	23½	30½	2P12-3F060	70.00	100
16	100	23½	36½	2P16-3F100	85.00	125
20	100	23½	39½	2P20-3F100	95.00	140

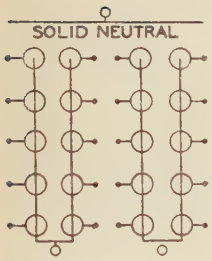
Safety Type Fuslok Main Switch, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box—Wide	Inside Dimensions and Marking of Box—High	Combination of Panelboard Box and Front—Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	30½	2P04-3SF060	$ 70.00	105
8	60	23½	33½	2P08-3SF060	78.00	115
12	60	23½	36½	2P12-3SF060	86.00	130
16	100	23½	42½	2P16-3SF100	100.00	155
20	100	23½	45½	2P20-3SF100	110.00	170

FA Safety Type N1P-3 Panelboards and Cabinets

Fuse Only Panelboard, One Fuse Type, One Door Construction



PANELBOARD— Made of sections of moulded material.

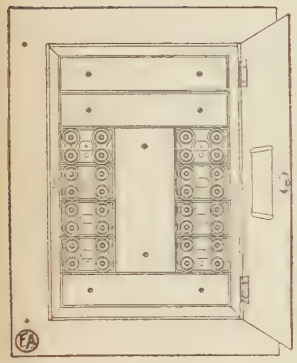
BRANCHES— 30 Amp., S. P. , N. E. C. Plug Type Fuse Connections only for 125 Volt, 2 Wire; Solid Neutral Circuits.

MAINS— 3 Wire, 125-250 Volt, Solid Neutral.

BOX— Code Thickness Galvanized Steel, 4¾″ Deep, 4″ Gutters.

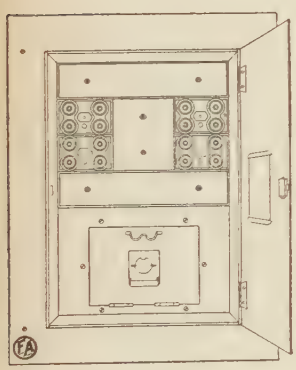
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



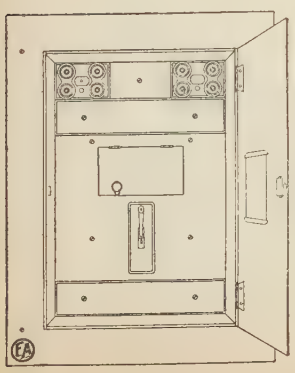
Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	See type NR3G panelboard prices.					
8	See type NR3G panelboard prices.					
12	See type NR3G panelboard prices.					
16	100	23½	21½	N1P16-3L100	$ 56.00	85
24	100	23½	24½	N1P24-3L100	66.00	105
32	100	23½	27½	N1P32-3L100	76.00	115
40	200	23½	36½	N1P40-3L200	106.00	165

Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
8	60	23½	27½	N1P08-3F060	$ 60.00	90
16	100	23½	36½	N1P16-3F100	80.00	125
24	100	23½	39½	N1P24-3F100	90.00	140
32	100	23½	42½	N1P32-3F100	105.00	150
40	200	23½	51½	N1P40-3F200	136.00	195

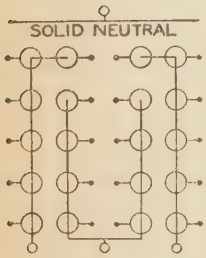
Safety Type Fuslok Main Switch, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
8	60	23½	33½	N1P08-3SF060	$ 74.00	115
16	100	23½	42½	N1P16-3SF100	95.00	155
24	100	23½	45½	N1P24-3SF100	108.00	170
32	100	23½	48½	N1P32-3SF100	120.00	185
40	200	23½	57½	N1P40-3SF200	166.00	225

FA Safety Type N1P-4 Panelboards and Cabinets

Fuse Only Panelboard, One Fuse Type, One Door Construction



PANELBOARD— Made of sections of moulded material.

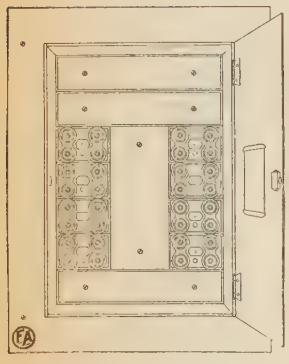
BRANCHES— 30 Amp., S. P., N. E. C. Plug Type Fuse Connections only for 120 Volt, 2 Wire; Solid Neutral Circuits.

MAINS— 3 Phase, 4 Wire; 120-208 Volt, Solid Neutral.

BOX — Code Thickness Galvanized Steel, 4¾" Deep, 4" Gutters.

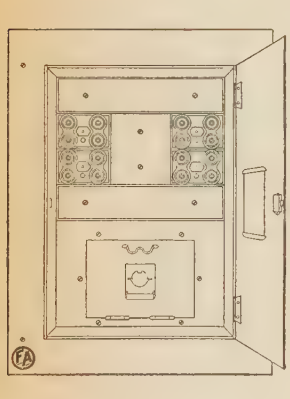
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



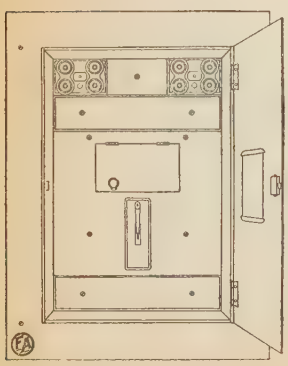
Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
8	60	23½	18½	N1P08-4L060	$ 50.00	75
16	60	23½	24½	N1P16-4L060	60.00	105
24	60	23½	27½	N1P24-4L060	70.00	115
32	100	23½	30½	N1P32-4L100	80.00	135
40	100	23½	36½	N1P40-4L100	108.00	165

Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
8	60	23½	27½	N1P08-4F060	$ 70.00	90
16	60	23½	33½	N1P16-4F060	84.00	100
24	60	23½	36½	N1P24-4F060	94.00	125
32	100	23½	42½	N1P32-4F100	110.00	150
40	100	23½	48½	N1P40-4F100	140.00	180

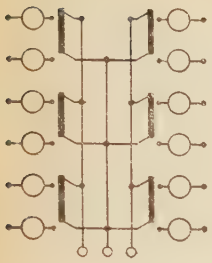
Safety Type Fuslok Main Switch, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
8	60	23½	33½	N1P08-4SF060	$ 82.00	115
16	60	23½	39½	N1P16-4SF060	104.00	140
24	60	23½	42½	N1P24-4SF060	120.00	155
32	100	23½	48½	N1P32-4SF100	132.00	185
40	100	23½	54½	N1P40-4SF100	176.00	210

FA Safety Type T2P-3 Panelboards and Cabinets

Switch and Fuse Panelboards, Two Fuse Type, One Door Construction



PANELBOARD— Made of sections of moulded material.

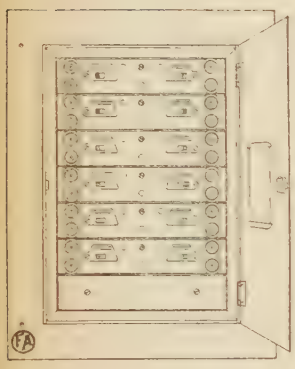
BRANCHES— 30 Amp., D. P. Tumbler Switches with N. E. C. Plug Type Fuse Connections for 125 Volt, 2 Wire Circuits.

MAINS— 3 Wire, 125-250 Volt.

BOX— Code Thickness Galvanized Steel, 4¾″ Deep, 4″ Gutters.

FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

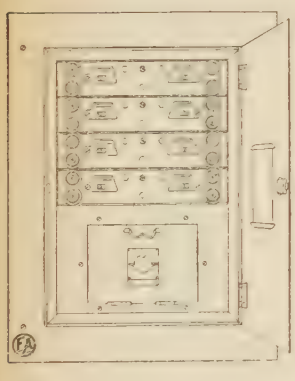
Main Cable Lugs Only



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	15½	T2P04-3L060	$38.00	65
6	60	23½	18½	T2P06-3L060	48.00	85
8	60	23½	21½	T2P08-3L060	58.00	90
10	60	23½	24½	T2P10-3L060	68.00	100
12	60	23½	27½	T2P12-3L060	78.00	110
14	100	23½	33½	T2P14-3L100	90.00	130
16	100	23½	36½	T2P16-3L100	100.00	145
18	100	23½	39½	T2P18-3L100	110.00	165
20	100	23½	42½	T2P20-3L100	124.00	180

Substitute letter C for letter P in catalogue number for similar Non-Safety Type Panelboards with cartridge type fuse connections in branches.

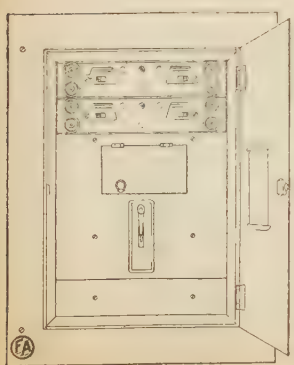
Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	21½	T2P04-3F060	$52.00	85
6	60	23½	27½	T2P06-3F060	62.00	90
8	60	23½	30½	T2P08-3F060	72.00	100
10	60	23½	33½	T2P10-3F060	82.00	110
12	60	23½	36½	T2P12-3F060	92.00	115
14	100	23½	42½	T2P14-3F100	112.00	135
16	100	23½	45½	T2P16-3F100	122.00	150
18	100	23½	48½	T2P18-3F100	132.00	170
20	100	23½	51½	T2P20-3F100	142.00	185

Substitute letter C for letter P in catalogue number for similar Non-Safety Type Panelboards with cartridge type fuse connections in branches.

Safety Type Fuslok Main Switch, Solid Neutral

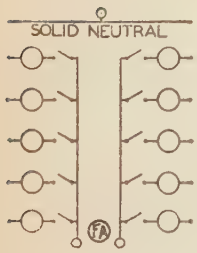


Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	30½	T2P04-3SF060	$70.00	110
6	60	23½	33½	T2P06-3SF060	80.00	120
8	60	23½	36½	T2P08-3SF060	90.00	140
10	60	23½	39½	T2P10-3SF060	100.00	155
12	60	23½	42½	T2P12-3SF060	110.00	170
14	100	23½	48½	T2P14-3SF100	130.00	190
16	100	23½	51½	T2P16-3SF100	140.00	205
18	100	23½	54½	T2P18-3SF100	150.00	225
20	100	23½	57½	T2P20-3SF100	166.00	240

Substitute letter C for letter P in catalogue number for similar Non-Safety Type Panelboards with cartridge type fuse connections in branches.

FA Safety Type LNT1P-3 Panelboards and Cabinets

Switch and Fuse Panelboards, One Fuse Type, One Door Construction



PANELBOARD— Made of sections of brown Bakelite.

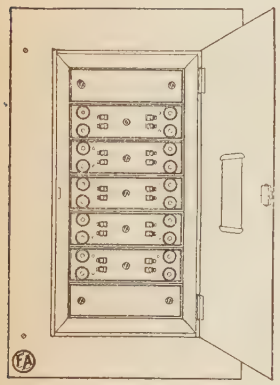
BRANCHES— 30 Amp. S. P. Tumbler Switches with N. E. C. Plug Type Fuse Conn. for 125 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 3 Wire, 125-250 Volt, Solid Neutral.

BOX— Code Thickness Galvanized Steel, 4¾" Deep, 4" Gutters.

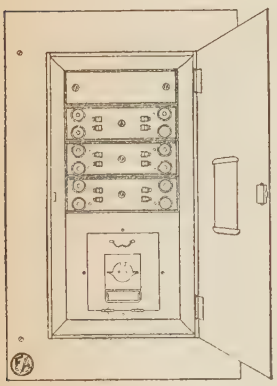
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



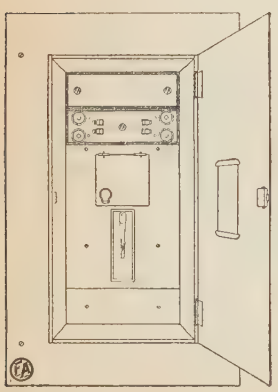
Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	19	15½	LNT1P04-3L060	$ 34.00	37
8	60	19	18½	LNT1P08-3L060	40.00	44
12	60	19	21½	LNT1P12-3L060	50.00	51
16	100	19	27½	LNT1P16-3L100	74.00	65
20	100	19	30½	LNT1P20-3L100	84.00	72
24	100	19	33½	LNT1P24-3L100	94.00	79
28	100	19	39½	LNT1P28-3L100	104.00	94
32	100	19	42½	LNT1P32-3L100	114.00	100
36	200	19	45½	LNT1P36-3L200	140.00	170
40	200	19	48½	LNT1P40-3L200	150.00	180

Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	19	24½	LNT1P04-3F060	$ 46.00	70
8	60	19	27½	LNT1P08-3F060	58.00	80
12	60	19	30½	LNT1P12-3F060	70.00	90
16	100	19	36½	LNT1P16-3F100	90.00	115
20	100	19	39½	LNT1P20-3F100	102.00	125
24	100	19	42½	LNT1P24-3F100	114.00	160
28	100	19	48½	LNT1P28-3F100	126.00	185
32	100	19	51½	LNT1P32-3F100	138.00	197
36	200	19	57½	LNT1P36-3F200	166.00	225
40	200	19	60½	LNT1P40-3F200	178.00	255

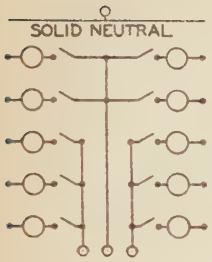
Safety Type Fuslok Main Switch, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	19	30½	LNT1P04-3SF060	$ 64.00	93
8	60	19	33½	LNT1P08-3SF060	74.00	103
12	60	19	36½	LNT1P12-3SF060	86.00	113
16	100	19	42½	LNT1P16-3SF100	110.00	160
20	100	19	45½	LNT1P20-3SF100	122.00	172
24	100	19	48½	LNT1P24-3SF100	134.00	183
28	100	19	54½	LNT1P28-3SF100	146.00	207
32	100	19	57½	LNT1P32-3SF100	158.00	220
36	200	19	66½	LNT1P36-3SF200	206.00	283
40	200	19	69½	LNT1P40-3SF200	218.00	297

FA Safety Type LNT1P-4 Panelboards and Cabinets

Switch and Fuse Panelboards, One Fuse Type, One Door Construction



PANELBOARD— Made of Sections of Brown Bakelite.

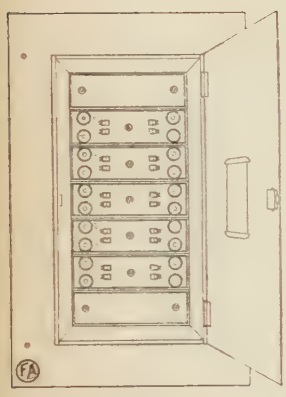
BRANCHES— 30 Amp., S. P. Tumbler Switches with N. E. C. Plug Type Fuse Connections for 120 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 3 Phase, 4 Wire; 120-208 Volt, Solid Neutral.

BOX— Code Thickness Galvanized Steel, 4¾″ Deep, 4″ Gutters.

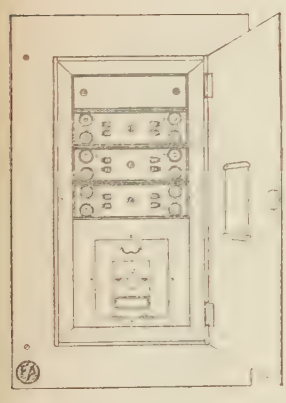
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



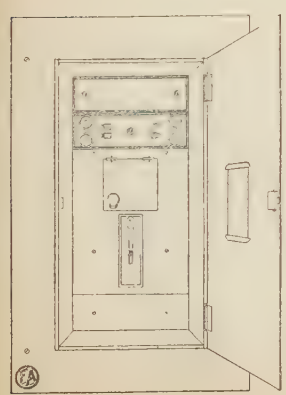
Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	19	18½	LNT1P04-4L060	$40.00	42
8	60	19	21½	LNT1P08-4L060	52.00	50
12	60	19	24½	LNT1P12-4L060	62.00	57
16	60	19	27½	LNT1P16-4L060	78.00	65
20	60	19	30½	LNT1P20-4L060	88.00	72
24	60	19	33½	LNT1P24-4L060	100.00	79
28	100	19	39½	LNT1P28-4L100	110.00	94
32	100	19	42½	LNT1P32-4L100	120.00	100
36	100	19	45½	LNT1P36-4L100	146.00	170
40	100	19	48½	LNT1P40-4L100	156.00	180

Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	19	24½	LNT1P04-4F060	$54.00	70
8	60	19	27½	LNT1P08-4F060	66.00	80
12	60	19	30½	LNT1P12-4F060	78.00	90
16	60	19	33½	LNT1P16-4F060	96.00	100
20	60	19	36½	LNT1P20-4F060	108.00	115
24	60	19	39½	LNT1P24-4F060	120.00	125
28	100	19	48½	LNT1P28-4F100	132.00	185
32	100	19	51½	LNT1P32-4F100	148.00	197
36	100	19	54½	LNT1P36-4F100	170.00	210
40	100	19	57½	LNT1P40-4F100	182.00	225

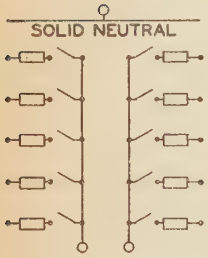
Safety Type Fuslok Main Switch, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	19	30½	LNT1P04-4SF060	$76.00	93
8	60	19	33½	LNT1P08-4SF060	88.00	103
12	60	19	36½	LNT1P12-4SF060	100.00	113
16	60	19	39½	LNT1P16-4SF060	122.00	125
20	60	19	42½	LNT1P20-4SF060	136.00	160
24	60	19	45½	LNT1P24-4SF060	148.00	172
28	100	19	54½	LNT1P28-4SF100	162.00	207
32	100	19	57½	LNT1P32-4SF100	176.00	220
36	100	19	60½	LNT1P36-4SF100	222.00	240
40	100	19	63½	LNT1P40-4SF100	234.00	260

FA Safety Type NT1C-3D Panelboards and Cabinets

Switch and Fuse Panelboards, One Fuse Type, Door-in-Door Construction



PANELBOARD— Made of sections of moulded material.

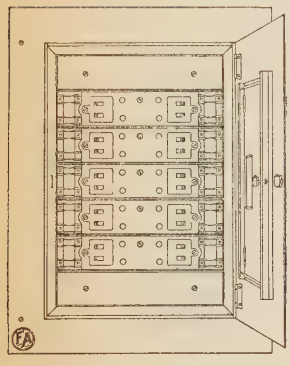
BRANCHES— 30 Amp., S. P. Tumbler Switches with Cartridge Type Fuse Connections for 125 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 3 Wire, 125-250 Volt, Solid Neutral.

BOX— Code Thickness Galvanized Steel, 4¾" Deep, 4" Gutters.

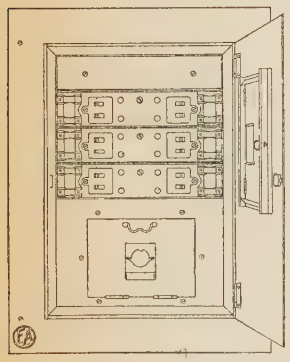
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



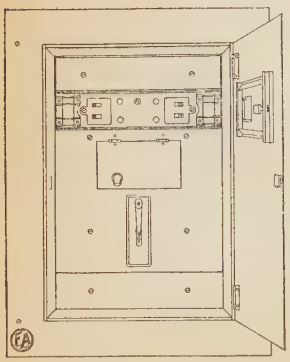
Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	18½	NT1C04–3L060D	$ 50.00	85
8	60	23½	21½	NT1C08–3L060D	60.00	90
12	60	23½	24½	NT1C12–3L060D	70.00	100
16	100	23½	27½	NT1C16–3L100D	86.00	110
20	100	23½	30½	NT1C20–3L100D	96.00	115
24	100	23½	33½	NT1C24–3L100D	106.00	130
28	100	23½	36½	NT1C28–3L100D	116.00	145
32	100	23½	39½	NT1C32–3L100D	126.00	165
36	200	23½	45½	NT1C36–3L200D	152.00	200
40	200	23½	48½	NT1C40–3L200D	162.00	215

Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	24½	NT1C04–3F060D	$ 62.00	80
8	60	23½	27½	NT1C08–3F060D	74.00	85
12	60	23½	30½	NT1C12–3F060D	86.00	95
16	100	23½	36½	NT1C16–3F100D	102.00	115
20	100	23½	39½	NT1C20–3F100D	114.00	135
24	100	23½	42½	NT1C24–3F100D	126.00	150
28	100	23½	45½	NT1C28–3F100D	138.00	170
32	100	23½	48½	NT1C32–3F100D	150.00	185
36	200	23½	57½	NT1C36–3F200D	178.00	235
40	200	23½	60½	NT1C40–3F200D	190.00	255

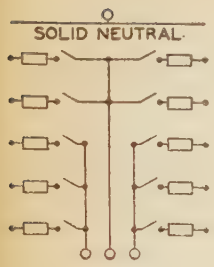
Safety Type Fuslok Main Switch, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	30½	NT1C04–3SF060D	$ 80.00	110
8	60	23½	33½	NT1C08–3SF060D	90.00	120
12	60	23½	36½	NT1C12–3SF060D	102.00	140
16	100	23½	42½	NT1C16–3SF100D	122.00	170
20	100	23½	45½	NT1C20–3SF100D	134.00	190
24	100	23½	48½	NT1C24–3SF100D	146.00	225
28	100	23½	51½	NT1C28–3SF100D	158.00	235
32	100	23½	54½	NT1C32–3SF100D	170.00	240
36	200	23½	66½	NT1C36–3SF200D	218.00	290
40	200	23½	69½	NT1C40–3SF200D	230.00	310

FA Safety Type NT1C-4D Panelboards and Cabinets

Switch and Fuse Panelboards, One Fuse Type, Door-in-Door Construction



PANELBOARD— Made of sections of moulded material.

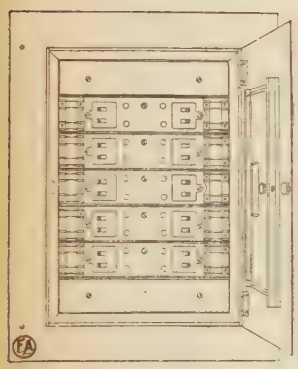
BRANCHES— 30 Amp., S. P. Tumbler Switches with Cartridge Type Fuse Connections for 120 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 3 Phase, 4 Wire; 120-208 Volt, Solid Neutral.

BOX— Code Thickness Galvanized Steel, 4¾″ Deep, 4″ Gutters.

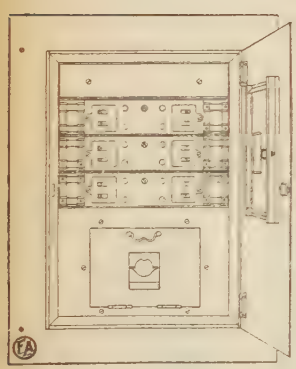
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



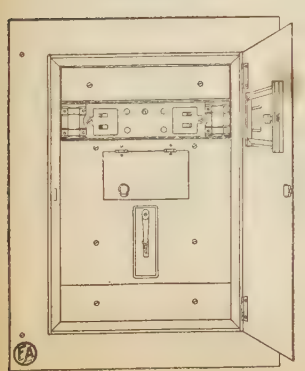
Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	18½	NT1C04–4L060D	$ 52.00	75
8	60	23½	21½	NT1C08–4L060D	64.00	85
12	60	23½	24½	NT1C12–4L060D	74.00	100
16	60	23½	30½	NT1C16–4L060D	90.00	115
20	60	23½	33½	NT1C20–4L060D	100.00	130
24	60	23½	36½	NT1C24–4L060D	112.00	145
28	100	23½	39½	NT1C28–4L100D	122.00	165
32	100	23½	42½	NT1C32–4L100D	132.00	180
36	100	23½	48½	NT1C36–4L100D	154.00	200
40	100	23½	51½	NT1C40–4L100D	164.00	235

Switchfuz Safety Type Main Fuse Disconnect, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	27½	NT1C04–4F060D	$ 66.00	85
8	60	23½	30½	NT1C08–4F060D	78.00	95
12	60	23½	33½	NT1C12–4F060D	90.00	110
16	60	23½	39½	NT1C16–4F060D	108.00	125
20	60	23½	42½	NT1C20–4F060D	120.00	140
24	60	23½	45½	NT1C24–4F060D	132.00	155
28	100	23½	51½	NT1C28–4F100D	144.00	185
32	100	23½	54½	NT1C32–4F100D	160.00	200
36	100	23½	57½	NT1C36–4F100D	180.00	220
40	100	23½	60½	NT1C40–4F100D	194.00	250

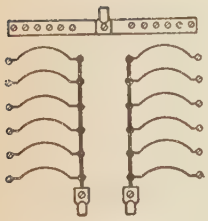
Safety Type Fuslok Main Switch, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	Inside Dimensions and Marking of Box — High	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	60	23½	33½	NT1C04–4SF060D	$ 88.00	120
8	60	23½	36½	NT1C08–4SF060D	100.00	140
12	60	23½	39½	NT1C12–4SF060D	112.00	155
16	60	23½	45½	NT1C16–4SF060D	134.00	190
20	60	23½	48½	NT1C20–4SF060D	148.00	200
24	60	23½	51½	NT1C24–4SF060D	160.00	210
28	100	23½	57½	NT1C28–4SF100D	174.00	240
32	100	23½	60½	NT1C32–4SF100D	188.00	255
36	100	23½	63½	NT1C36–4SF100D	234.00	275
40	100	23½	66½	NT1C40–4SF100D	246.00	290

FA Safety Type NA1B-3 Panelboards and Cabinets

Circuit Breaker Panelboards, One Pole Breaker, One Door Construction



PANELBOARD— Made of sections of Brown Bakelite.

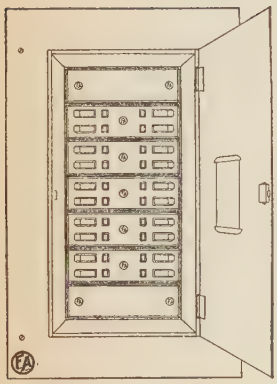
BRANCHES— *15 Amp., S. P. Thermal Type Automatic Circuit Breakers for 125 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 3 Wire, 125-250 Volt, Solid Neutral.

BOX— Code Thickness Galvanized Steel, 4" Gutters.

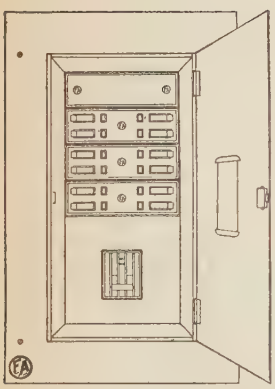
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	High	Deep	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	50	19	15½	4¾	NA1B04–3L050	$50.60	37
6	50	19	18½	4¾	NA1B06–3L050	60.90	42
8	50	19	18½	4¾	NA1B08–3L050	72.20	42
10	50	19	21½	4¾	NA1B10–3L050	83.60	50
12	100	19	21½	4¾	NA1B12–3L100	98.00	50
14	100	19	27½	4¾	NA1B14–3L100	110.40	65
16	100	19	27½	4¾	NA1B16–3L100	122.80	65
18	100	19	30½	4¾	NA1B18–3L100	135.10	72
20	100	19	30½	4¾	NA1B20–3L100	147.50	72
22	100	19	33½	4¾	NA1B22–3L100	159.90	79
24	100	19	33½	4¾	NA1B24–3L100	172.30	79
26	100	19	39½	4¾	NA1B26–3L100	184.60	94
28	100	19	39½	4¾	NA1B28–3L100	197.00	94
30	100	19	42½	4¾	NA1B30–3L100	209.40	100
32	100	19	42½	4¾	NA1B32–3L100	221.80	100
34	200	19	45½	4¾	NA1B34–3L200	245.50	170
36	200	19	45½	4¾	NA1B36–3L200	258.90	170
38	200	19	48½	4¾	NA1B38–3L200	272.30	180
40	200	19	48½	4¾	NA1B40–3L200	285.70	180

Main Automatic Circuit Breaker, Solid Neutral

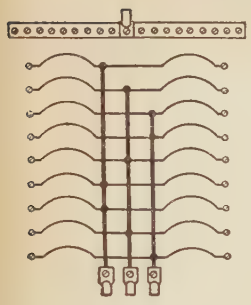


Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	High	Deep	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	50	19	21½	4¾	NA1B04–3AB050	$73.20	63
6	50	19	24½	4¾	NA1B06–3AB050	83.60	73
8	50	19	24½	4¾	NA1B08–3AB050	94.90	73
10	50	19	27½	4¾	NA1B10–3AB050	106.20	83
12	100	19	33½	5½	NA1B12–3AB100	142.40	103
14	100	19	36½	5½	NA1B14–3AB100	154.80	113
16	100	19	36½	5½	NA1B16–3AB100	167.10	113
18	100	19	39½	5½	NA1B18–3AB100	179.50	148
20	100	19	39½	5½	NA1B20–3AB100	191.90	148
22	100	19	42½	5½	NA1B22–3AB100	208.40	160
24	100	19	42½	5½	NA1B24–3AB100	220.80	160
26	100	19	48½	5½	NA1B26–3AB100	233.10	183
28	100	19	48½	5½	NA1B28–3AB100	245.50	183
30	100	19	51½	5½	NA1B30–3AB100	257.90	195
32	100	19	51½	5½	NA1B32–3AB100	270.30	195
34	200	19	60½	5½	NA1B34–3AB200	355.90	255
36	200	19	60½	5½	NA1B36–3AB200	369.30	255
38	200	19	63½	5½	NA1B38–3AB200	382.70	269
40	200	19	63½	5½	NA1B40–3AB200	396.10	269

*List prices are based on supplying 15-ampere breakers. 20 and 25-ampere breakers will be supplied for branches at same price except when increased capacity bus bars are required; 35 and 50-ampere breakers can be supplied at $1.00 list extra per circuit plus increased capacity bus bars and/or main circuit breaker, if necessary.

FA Safety Type NA1B-4 Panelboards and Cabinets

Circuit Breaker Panelboards, One Pole Breaker, One Door Construction



PANELBOARD— Made of sections of Brown Bakelite.

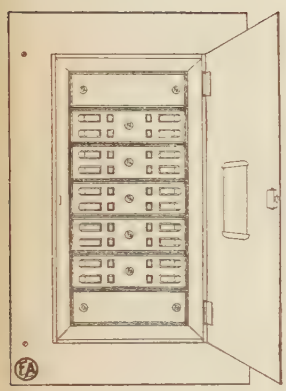
BRANCHES— *15 Amp., S. P. Thermal Type Automatic Circuit Breakers for 120 Volt, 2 Wire, Solid Neutral Circuits.

MAINS— 3 Phase, 4 Wire; 120-208 Volt, Solid Neutral.

BOX— Code Thickness Galvanized Steel, 4" Gutters.

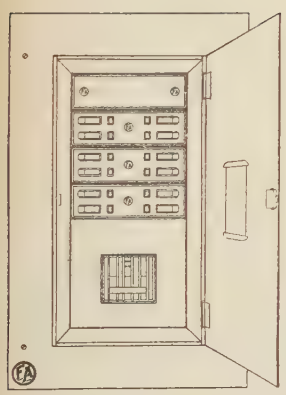
FRONT— Code Thickness Furniture Steel. Rust-proof and Black Finish. Flush Mounting unless Surface is ordered.

Main Cable Lugs Only, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	High	Deep	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	50	19	15½	4¾	NA1B04-4L050	$52.60	37
6	50	19	18½	4¾	NA1B06-4L050	64.00	42
8	50	19	18½	4¾	NA1B08-4L050	75.30	42
10	50	19	21½	4¾	NA1B10-4L050	87.70	50
12	50	19	21½	4¾	NA1B12-4L050	99.00	50
14	50	19	27½	4¾	NA1B14-4L050	111.40	65
16	100	19	27½	4¾	NA1B16-4L100	125.80	65
18	100	19	30½	4¾	NA1B18-4L100	138.20	72
20	100	19	30½	4¾	NA1B20-4L100	150.60	72
22	100	19	33½	4¾	NA1B22-4L100	163.00	79
24	100	19	33½	4¾	NA1B24-4L100	175.40	79
26	100	19	39½	4¾	NA1B26-4L100	187.70	94
28	100	19	39½	4¾	NA1B28-4L100	200.10	94
30	100	19	42½	4¾	NA1B30-4L100	212.50	100
32	100	19	42½	4¾	NA1B32-4L100	224.90	100
34	100	19	45½	4¾	NA1B34-4L100	245.50	170
36	100	19	45½	4¾	NA1B36-4L100	258.90	170
38	100	19	48½	4¾	NA1B38-4L100	272.30	180
40	100	19	48½	4¾	NA1B40-4L100	285.70	180

Main Automatic Circuit Breaker, Solid Neutral



Branches	Amperes Main Bus Bar	Inside Dimensions and Marking of Box — Wide	High	Deep	Combination of Panelboard Box and Front — Catalogue Number	Each	Approx. Wt., Lbs.
4	50	19	21½	4¾	NA1B04-4AB050	$81.50	63
6	50	19	24½	4¾	NA1B06-4AB050	92.80	73
8	50	19	24½	4¾	NA1B08-4AB050	104.20	73
10	50	19	27½	4¾	NA1B10-4AB050	116.60	83
12	50	19	27½	4¾	NA1B12-4AB050	127.90	83
14	50	19	33½	4¾	NA1B14-4AB050	140.30	103
16	100	19	36½	5½	NA1B16-4AB100	185.70	113
18	100	19	39½	5½	NA1B18-4AB100	197.00	148
20	100	19	39½	5½	NA1B20-4AB100	209.40	148
22	100	19	42½	5½	NA1B22-4AB100	225.90	160
24	100	19	42½	5½	NA1B24-4AB100	238.30	160
26	100	19	48½	5½	NA1B26-4AB100	250.70	183
28	100	19	48½	5½	NA1B28-4AB100	263.00	183
30	100	19	51½	5½	NA1B30-4AB100	275.40	195
32	100	19	51½	5½	NA1B32-4AB100	287.80	195
34	100	19	54½	5½	NA1B34-4AB100	305.30	207
36	100	19	54½	5½	NA1B36-4AB100	318.80	207
38	100	19	57½	5½	NA1B38-4AB100	332.20	220
40	100	19	57½	5½	NA1B40-4AB100	345.60	220

*List prices are based on supplying 15-ampere breakers. 20 and 25-ampere breakers will be supplied for branches at same price except when increased capacity bus bars are required; 35 and 50-ampere breakers can be supplied at $1.00 list extra per circuit plus increased capacity bus bars and/or main circuit breaker, if necessary.

FA Increased Mains and Sub-Feeders

Additions to Combination List Prices for Increased Mains and Sub-Feeders

2/2 Wire and 3/2 (Solid Neutral) Safety Type Panelboards and Cabinets

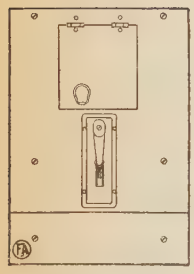
Cable Lugs Only

Increased Mains: Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height: One Door	Door in Door	One Sub-Feeder: Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height: One Door: N1P-LNT1P NT1C	2P	T2P T2C	Door-in-Door: LNT1P NT1C	T2P T2C
60	100	$4.10	3″	...	60	$2.10	3″	3″	....	....	....
60	200	6.20	3″	...	100	3.10	3″	6″	3″	3″	....
100	200	5.20	..	...	200	4.10	3″	6″	3″	3″	....

Switchfuz Safety Type Fuse Disconnect

Increased Mains: Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height: One Door	Door in Door	One Sub-Feeder: Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height: One Door: N1P	2P-LNT1P NT1C	T2P T2C	Door-in-Door: LNT1P NT1C	T2P T2C
60	100	$4.10	3″	3″	30	$16.50	15″	12″	9″	12″	6″
60	200	16.50	6″	6″	60	18.60	15″	12″	9″	12″	6″
100	200	12.40	3″	3″	100	20.60	18″	15″	12″	15″	9″
					200	33.00	21″	18″	15″	18″	12″

Safety Type Fuslok Switch



Increased Mains: Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height: One Door	Door in Door	One Sub-Feeder: Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height: One Door: N1P	2P-LNT1P NT1C	T2P T2C	Door-in-Door: LNT1P NT1C	T2P T2C
60	100	$6.20	3″	3″	30	$30.90	21″	18″	15″	18″	12″
60	200	30.90	9″	9″	60	33.00	21″	18″	15″	18″	12″
100	200	26.80	6″	6″	100	37.10	24″	21″	18″	21″	15″
					200	61.90	30″	27″	24″	27″	21″

Automatic Circuit Breaker

Increased Mains: Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height All Types	One Sub-Feeder: Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height All Types
50	100	$27.90	3″	50	$22.70	9″
50	200	82.50	9″	100	44.40	12″
100	200	61.90	6″	200	109.30	18″

Main or sub-feed switches without fuse connections are same price as switches with fuse connections.

Non-automatic circuit breakers are special but can be furnished at increased cost. Prices on request.

FA Increased Mains and Sub-Feeders

Additions to Combination List Prices for Increased Mains and Sub-Feeders

3/2 Wire and 3 Phase, 4 Wire (Solid Neutral) Safety Type Panelboards and Cabinets

Cable Lugs Only

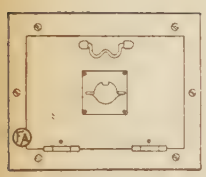
Increased Mains

Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height One Door	Door in Door
60	100	$5.20	3″	...
60	200	8.30	3″	...
100	200	7.20	..	...

One Sub-Feeder

Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height — One Door N1P-LNT1P NT1C	2P	T2P T2C	Door-in-Door LNT1P NT1C	T2P T2C
60	$3.10	3″	3″	..	..	..
100	4.10	3″	6″	3″	3″	..
200	6.20	3″	6″	3″	3″	..

Switchfuz Safety Type Fuse Disconnect



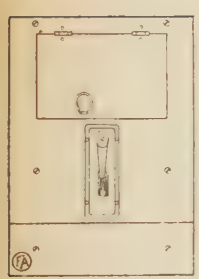
Increased Mains

Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height One Door	Door in Door
60	100	$6.20	3″	3″
60	200	20.60	6″	6″
100	200	16.50	3″	3″

One Sub-Feeder

Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height — One Door N1P	2P-LNT1P NT1C	T2P T2C	Door-in-Door LNT1P NT1C	T2P T2C
30	$18.60	15″	12″	9″	12″	6″
60	20.60	15″	12″	9″	12	6″
100	22.70	18″	15″	12″	15″	9″
200	41.30	21″	18″	15″	18″	12″

Safety Type Fuslok Switch



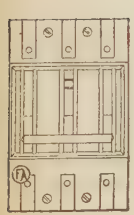
Increased Mains

Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height One Door	Door in Door
60	100	$8.30	3″	3″
60	200	35.10	9″	9″
100	200	33.00	6″	6″

One Sub-Feeder

Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height — One Door N1P	2P-LNT1P NT1C	T2P T2C	Door-in-Door LNT1P NT1C	T2P T2C
30	$33.00	21″	18″	15″	18″	12″
60	35.10	21″	18″	15″	18″	12″
100	41.30	24″	21″	18″	21″	15″
200	72.20	30″	27″	24″	27″	21″

Automatic Circuit Breaker



Increased Mains

Increased Capacity of Mains Amperes From	To	Add to List Price	Add to Box Height All Types
50	100	$36.10	3″
50	200	113.50	9″
100	200	80.50	6″

One Sub-Feeder

Capacity Sub-Feeder Amps.	Add to List Price	Add to Box Height All Types
50	$28.90	9″
100	58.80	12″
200	136.20	18″

Main or sub-feed switches without fuse connections are same price as switches with fuse connections.

Non-automatic circuit breakers are special, but can be furnished at increased cost. Prices on request.

Trumbull Unit Panelboards

3-Wire Mains, 125-250 Volts

3-Wire Branches, 125 Volts, Double-Pole

Using Automatic Overcurrent Protective Devices in 2 Legs Only

Solid Neutral Bar in Other

Single Door — *15-Amp. Automatic Circuit Breaker — Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	AB3N04L	$71	50	51201
6	AB3N06L	97	100	51202
8	AB3N08L	121	100	51203
10	AB3N10L	147	100	51204
12	AB3N12L	176	200	51205
14	AB3N14L	202	200	51206
16	AB3N16L	228	200	51207
18	AB3N18L	258	200	51208
20	AB3N20L	284	200	51209

Mains: Circuit Breaker

4	AB3N04AB	$93	50	51203
6	AB3N06AB	140	100	51205
8	AB3N08AB	164	100	51206
10	AB3N10AB	190	100	51207
12	AB3N12AB	286	200	51210x
14	AB3N14AB	312	200	51211x
16	AB3N16AB	338	200	51212x
18	AB3N18AB	364	200	51213x
20	AB3N20AB	390	200	51214x

Door in Door — †30-Amp. Tumbler Switch Fuses — Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	TP3N04LD	$63	60	51201
8	TP3N06LD	69	100	51202
8	TP3N08LD	79	100	51203
10	TP3N10LD	89	100	51204
12	TP3N12LD	100	200	51205
14	TP3N14LD	112	200	51206
16	TP3N16LD	122	200	51207
18	TP3N18LD	132	200	51208
20	TP3N20LD	142	200	51209

Mains: Converti-Fuse

4	TP3N04FD	$75	60	51203
6	TP3N06FD	87	100	51204
8	TP3N08FD	97	100	51205
10	TP3N10FD	107	100	51206
12	TP3N12FD	128	200	51208
14	TP3N14FD	138	200	51209
16	TP3N16FD	148	200	51210
18	TP3N18FD	158	200	51211
20	TP3N20FD	168	200	51212

Mains: Fusible "R.B." Switch

4	TP3N04SFD	$89	60	51204
6	TC3N06SFD	109	100	51206
8	TC3N08SFD	119	100	51207
10	TC3N10SFD	129	100	51208
12	TC3N12SFD	162	200	51209
14	TC3N14SFD	172	200	51210
16	TC3N16SFD	192	200	51211
18	TC3N18SFD	202	200	51212
20	TC3N20SFD	212	200	51213

Single Door — †30-Amp. Tumbler Switch Fuses — Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
TP3N04L	$43	60	51201
TP3N06L	53	100	51202
TP3N08L	63	100	51203
TP3N10L	73	100	51204
TP3N12L	84	200	51205
TP3N14L	96	200	51206
TP3N16L	106	200	51207
TP3N18L	116	200	51208
TP3N20L	126	200	51209

Mains: Converti-Fuse

TP3N04F	$59	60	51203
TP3N06F	71	100	51204
TP3N08F	81	100	51205
TP3N10F	91	100	51206
TP3N12F	112	200	51208
TP3N14F	122	200	51209
TP3N16F	132	200	51210
TP3N18F	142	200	51211
TP3N20F	152	200	51212

Mains: Fusible "R.B." Switch

TP3N04SF	$73	60	51204
TP3N06SF	93	100	51206
TP3N08SF	103	100	51207
TP3N10SF	113	100	51208
TP3N12SF	146	200	51209
TP3N14SF	156	200	51210
TP3N16SF	176	200	51211
TP3N18SF	186	200	51212
TP3N20SF	196	200	51213

Single Door — 30-Amp. Plug Fuses Only — Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
P3N08L	$46	100	51201
P3N12L	54	200	51202
P3N16L	62	200	51203
P3N20L	72	200	51204

Mains: Converti-Fuse

P3N04F	$55	60	51202
P3N08F	69	100	51203
P3N12F	87	200	51205
P3N16F	97	200	51206
P3N20F	107	200	51207

Mains: Fusible "R.B." Switch

P3N04SF	$71	60	51203
P3N08SF	81	100	51205
P3N12SF	122	200	51206
P3N16SF	132	200	51207
P3N20SF	142	200	51208

Trumbull Narrow Type Panelboards

3-Wire Mains, 125-250 Volts

2-Wire Branches, 125 Volts, Single-Pole

Using Automatic Overcurrent Protective Device in 1 Leg Only

Solid Neutral Bar in Other

Single Door — 30-Amp. Single-Pole Fuses Only in Branches — Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	NRP3G04	$16	30	51251
8	NRP3G08	20	60	51252
12	NRP3G12	24	60	51253
16	NRP3G16	30	100	51254
20	NRP3G20	34	100	51255
24	NRP3G24	42	100	51257
28	NRP3G28	48	100	51258
32	NRP3G32	54	100	51259

Single Door — 30-Amp. Single-Pole Tumbler Switches in Branches — Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
NRTP3G04	$34	30	51252
NRTP3G06	37	60	51253
NRTP3G08	40	60	51254
NRTP3G10	45	60	51255
NRTP3G12	50	60	51256
NRTP3G14	62	100	51257
NRTP3G16	74	100	51258

*Prices based on 15-ampere breakers. No increase for 20 and 25-ampere breakers. For 35 and 50-ampere breakers, add $2.00 for double-pole. Add increased mains, if required.

†Panels with cartridge fuses instead of plug fuses can be furnished at no additional charge. For Cat. No. substitute TC, NRTC, or RTC for TP, NRTP, or RTP.

Cat. Nos. and prices include panel (less fuses), barriers and code gauge steel cabinets.

3-Wire Mains, 125-250 Volts

2-Wire Branches, 125 Volts, Double-Pole

Using Automatic Overcurrent Protective Device in Both Legs

No Neutral Bar

Single Door — 30-Amp. Double-Pole Fuses Only in Branches — Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	RP3G04	$16	30	51252
6	RP3G06	22	60	51253
8	RP3G08	26	60	51254
10	RP3G10	30	60	51255
12	RP3G12	34	60	51256
14	RP3G14	40	100	51257
16	RP3G16	44	100	51258
18	RP3G18	50	100	51259
20	RP3G20	54	100	51260

Single Door — 30-Amp. Double-Pole Tumbler Switches in Branches — Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
RTP3G02	$32	30	51252
RTP3G04	42	30	51254
RTP3G06	52	60	51256
RTP3G08	62	60	51258

Trumbull Unit Panelboards

4-Wire Mains, 3-Phase, 125-250 Volts
2-Wire Branches, 125 Volts, Single-Pole

Using Automatic Overcurrent Protective Device in 1 Leg Only
Solid Neutral Bar in Other

Single Door
*15-Amp. Automatic Circuit Breaker
Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	NAB404L	$51.00	50	51200
6	NAB406L	62.00	50	51201
8	NAB408L	73.00	50	51201
10	NAB410L	85.00	50	51202
12	NAB412L	96.00	50	51202
14	NAB414L	108.00	50	51203
16	NAB416L	122.00	100	51203
18	NAB418L	134.00	100	51204
20	NAB420L	146.00	100	51204
22	NAB422L	158.00	100	51205
24	NAB424L	170.00	100	51205
26	NAB426L	182.00	100	51206
28	NAB428L	194.00	100	51206
30	NAB430L	206.00	100	51207
32	NAB432L	218.00	100	51207
34	NAB434L	238.00	100	51208
36	NAB436L	251.00	100	51208
38	NAB438L	264.00	100	51209
40	NAB440L	277.00	100	51209
	Mains: Circuit Breaker			
4	NAB404AB	$79.00	50	51202
6	NAB406AB	90.00	50	51203
8	NAB408AB	101.00	50	51203
10	NAB410AB	113.00	50	51204
12	NAB412AB	124.00	50	51204
14	NAB414AB	136.00	50	51205
16	NAB416AB	180.00	100	51206
18	NAB418AB	191.00	100	51207
20	NAB420AB	203.00	100	51207
22	NAB422AB	219.00	100	51208
24	NAB424AB	231.00	100	51208
26	NAB426AB	243.00	100	51209
28	NAB428AB	255.00	100	51209
30	NAB430AB	267.00	100	51210
32	NAB432AB	279.00	100	51210
34	NAB434AB	296.00	100	51211
36	NAB436AB	309.00	100	51211
38	NAB438AB	322.00	100	51212
40	NAB440AB	335.00	100	51212

Door in Door
†30-Amp. Tumbler Switch Fuses
Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	NTP404LD	$52.00	30	51200
8	NTP408LD	64.00	60	51201
12	NTP412LD	74.00	60	51202
16	NTP416LD	90.00	60	51203
20	NTP420LD	100.00	60	51204
24	NTP424LD	112.00	60	51205
28	NTP428LD	122.00	100	51206
32	NTP432LD	132.00	100	51207
36	NTP436LD	154.00	100	51208
40	NTP440LD	164.00	100	51209
	Mains: Converti-Fuse			
4	NTP404FD	$66.00	30	51202
8	NTP408FD	78.00	60	51203
12	NTP412FD	90.00	60	51204
16	NTP416FD	108.00	60	51205
20	NTP420FD	120.00	60	51206
24	NTP424FD	132.00	60	51207
28	NTP428FD	144.00	100	51208
32	NTP432FD	160.00	100	51209
36	NTP436FD	180.00	100	51211
40	NTP440FD	194.00	100	51212
	Mains: Fusible "R.B." Switch			
4	NTP404SFD	$88.00	30	51203
8	NTP408SFD	100.00	60	51204
12	NTP412SFD	112.00	60	51205
16	NTP416SFD	134.00	60	51206
20	NTP420SFD	148.00	60	51207
24	NTP424SFD	160.00	60	51208
28	NTP428SFD	174.00	100	51210
32	NTP432SFD	188.00	100	51211
36	NTP436SFD	234.00	100	51212
40	NTP440SFD	246.00	100	51213

Single Door
†30-Amp. Tumbler Switch Fuses
Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
NTP404L	$40.00	30	51200
NTP408L	52.00	60	51201
NTP412L	62.00	60	51202
NTP416L	78.00	60	51203
NTP420L	88.00	60	51204
NTP424L	100.00	60	51205
NTP428L	110.00	100	51206
NTP432L	120.00	100	51207
NTP436L	146.00	100	51208
NTP440L	156.00	100	51209
Mains: Converti-Fuse			
NTP404F	$54.00	30	51202
NTP408F	66.00	60	51203
NTP412F	78.00	60	51204
NTP416F	96.00	60	51205
NTP420F	108.00	60	51206
NTP424F	120.00	60	51207
NTP428F	132.00	100	51208
NTP432F	148.00	100	51209
NTP436F	170.00	100	51211
NTP440F	182.00	100	51212
Mains: Fusible "R.B." Switch			
NTP404SF	$76.00	30	51203
NTP408SF	88.00	60	51204
NTP412SF	100.00	60	51205
NTP416SF	122.00	60	51206
NTP420SF	136.00	60	51207
NTP424SF	148.00	60	51208
NTP428SF	162.00	100	51210
NTP432SF	176.00	100	51211
NTP436SF	222.00	100	51212
NTP440SF	234.00	100	51213

Single Door
30-Amp. Plug Fuses Only
Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
.....	.....	...	.....
.....	.....	...	.....
.....	.....	...	.....
NP416L	$60.00	60	51201
.....	.....	...	.....
NP424L	70.00	60	51202
.....	.....	...	.....
NP432L	80.00	100	51203
.....	.....	...	.....
NP440L	108.00	100	51204
Mains: Converti-Fuse			
.....	.....	...	.....
NP408F	$70.00	30	51202
.....	.....	...	.....
NP416F	84.00	60	51203
.....	.....	...	.....
NP424F	94.00	60	51204
.....	.....	...	.....
NP432F	110.00	100	51205
.....	.....	...	.....
NP440F	140.00	100	51207
Mains: Fus. "R.B." Switch			
.....	.....	...	.....
NP408SF	$82.00	30	51203
.....	.....	...	.....
NP416SF	104.00	60	51205
.....	.....	...	.....
NP424SF	120.00	60	51206
.....	.....	...	.....
NP432SF	132.00	100	51207
.....	.....	...	.....
NP440SF	176.00	100	51208

3-Wire Mains, 125-250 Volts
2-Wire Branches, 125 Volts, Double-Pole

Using Automatic Overcurrent Protective Devices in Both Legs
No Neutral Bar

	Mains: Lugs Only			
4	AB304L	$72.00	50	51203
6	AB306L	95.00	50	51204
8	AB308L	119.00	50	51205
10	AB310L	143.00	50	51206
12	AB312L	172.00	100	51208
14	AB314L	196.00	100	51209
16	AB316L	222.00	100	51210
18	AB318L	251.00	100	51211
20	AB320L	277.00	100	51212
..	.....	.....	...	.....
..	.....	.....	...	.....
..	.....	.....	...	.....
..	.....	.....	...	.....
..	.....	.....	...	.....
..	.....	.....	...	.....
..	.....	.....	...	.....
..	.....	.....	...	.....
..	.....	.....	...	.....
	Mains: Circuit Breaker			
4	AB304AB	$100.00	50	51203
6	AB306AB	123.00	50	51204
8	AB308AB	147.00	50	51205
10	AB310AB	171.00	50	51206
12	AB312AB	230.00	100	51208
14	AB314AB	258.00	100	51209
16	AB316AB	282.00	100	51210
18	AB318AB	308.00	100	51211
20	AB320AB	334.00	100	51212

*Prices based on 15-ampere breakers. No increase for 20 and 25-ampere breakers. For 35 and 50-ampere breakers, add $1.00 for single-pole, $2.00 for double-pole. Add increased mains, if required.

	Mains: Lugs Only			
4	TP304LD	$58.00	30	51201
6	TP306LD	68.00	60	51202
8	TP308LD	78.00	60	51203
10	TP310LD	88.00	60	51204
12	TP312LD	98.00	60	51205
14	TP314LD	106.00	100	51206
16	TP316LD	116.00	100	51207
18	TP318LD	126.00	100	51208
20	TP320LD	140.00	100	51209
	Mains: Converti-Fuse			
4	TP304FD	$68.00	30	51203
6	TP306FD	78.00	60	51204
8	TP308FD	88.00	60	51205
10	TP310FD	98.00	60	51206
12	TP312FD	108.00	60	51207
14	TP314FD	128.00	100	51208
16	TP316FD	138.00	100	51209
18	TP318FD	148.00	100	51210
20	TP320FD	158.00	100	51211
	Mains: Fusible "R.B." Switch			
4	TP304SFD	$86.00	30	51204
6	TP306SFD	96.00	60	51205
8	TP308SFD	106.00	60	51206
10	TP310SFD	116.00	60	51207
12	TP312SFD	126.00	60	51208
14	TP314SFD	146.00	100	51210
16	TP316SFD	156.00	100	51211
18	TP318SFD	166.00	100	51212
20	TP320SFD	182.00	100	51213

Cat. No.	Each	Amp. Mains	Box No.
Mains: Lugs Only			
TP304L	$38.00	30	51201
TP306L	48.00	60	51202
TP308L	58.00	60	51203
TP310L	68.00	60	51204
TP312L	78.00	60	51205
TP314L	90.00	100	51206
TP316L	100.00	100	51207
TP318L	110.00	100	51208
TP320L	124.00	100	51209
Mains: Converti-Fuse			
TP304F	$52.00	30	51203
TP306F	62.00	60	51204
TP308F	72.00	60	51205
TP310F	82.00	60	51206
TP312F	92.00	60	51207
TP314F	112.00	100	51208
TP316F	122.00	100	51209
TP318F	132.00	100	51210
TP320F	142.00	100	51211
Mains: Fusible "R.B." Switch			
TP304SF	$70.00	30	51204
TP306SF	80.00	60	51205
TP308SF	90.00	60	51206
TP310SF	100.00	60	51207
TP312SF	110.00	60	51208
TP314SF	130.00	100	51210
TP316SF	140.00	100	51211
TP318SF	150.00	100	51212
TP320SF	166.00	100	51213

Cat. No.	Each	Amp. Mains	Box No.
Mains: Lugs Only			
.....	.....	...	.....
.....	.....	...	.....
P308L	$45.00	60	51201
.....	.....	...	.....
P312L	52.00	60	51202
.....	.....	...	.....
P316L	60.00	100	51203
.....	.....	...	.....
P320L	70.00	100	51204
Mains: Converti-Fuse			
P304F	$54.00	30	00000
.....	.....	...	.....
P308F	62.00	60	51203
.....	.....	...	.....
P312F	70.00	60	51204
.....	.....	...	.....
P316F	85.00	100	51205
.....	.....	...	.....
P320F	95.00	100	51206
Mains: Fus. "R.B." Switch			
P304SF	$70.00	30	00000
.....	.....	...	.....
P308SF	78.00	60	51204
.....	.....	...	.....
P312SF	86.00	60	51205
.....	.....	...	.....
P316SF	100.00	100	51207
.....	.....	...	.....
P320SF	110.00	100	51208

†Panels with cartridge fuses instead of plug fuses can be furnished at no additional charge. For Cat. No. substitute NTC or TC for NTP or TP.

Cat. Nos. and prices include panel (less fuses), barriers and code gauge steel cabinets.

Trumbull Unit Panelboards

3-Wire Mains, 125-250 Volts
2-Wire Branches, 125 Volts, Single-Pole

Using Automatic Overcurrent Protective Device in 1 Leg Only
Solid Neutral Bar in Other

Single Door
*15-Amp. Automatic Circuit Breaker
Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	NAB304L	$49.00	50	51200
6	NAB306L	59.00	50	51201
8	NAB308L	70.00	50	51201
10	NAB310L	81.00	50	51202
12	NAB312L	95.00	100	51202
14	NAB314L	107.00	100	51203
16	NAB316L	119.00	100	51203
18	NAB318L	131.00	100	51204
20	NAB320L	143.00	100	51204
22	NAB322L	155.00	100	51205
24	NAB324L	167.00	100	51205
26	NAB326L	179.00	100	51206
28	NAB328L	191.00	100	51206
30	NAB330L	203.00	100	51207
32	NAB332L	215.00	100	51207
34	NAB334L	238.00	200	51208
36	NAB336L	251.00	200	51208
38	NAB338L	264.00	200	51209
40	NAB340L	277.00	200	51209
	Mains: Circuit Breaker			
4	NAB304AB	$71.00	50	51202
6	NAB306AB	81.00	50	51203
8	NAB308AB	92.00	50	51203
10	NAB310AB	103.00	50	51204
12	NAB312AB	138.00	100	51205
14	NAB314AB	150.00	100	51206
16	NAB316AB	162.00	100	51206
18	NAB318AB	174.00	100	51207
20	NAB320AB	186.00	100	51207
22	NAB322AB	202.00	100	51208
24	NAB324AB	214.00	100	51208
26	NAB326AB	226.00	100	51209
28	NAB328AB	238.00	100	51209
30	NAB330AB	250.00	100	51210
32	NAB332AB	262.00	100	51210
34	NAB334AB	345.00	200	‡51213
36	NAB336AB	358.00	200	‡51213
38	NAB338AB	371.00	200	‡51214
40	NAB340AB	384.00	200	‡51214

Door in Door
†30-Amp. Tumbler Switch Fuses
Mains: Lugs Only

No. Cir.	Cat. No.	Each	Amp. Mains	Box No.
4	NTP304LD	$50.00	30	51200
8	NTP308LD	60.00	60	51201
12	NTP312LD	70.00	60	51202
16	NTP316LD	86.00	100	51203
20	NTP320LD	96.00	100	51204
24	NTP324LD	106.00	100	51205
28	NTP328LD	116.00	100	51206
32	NTP332LD	126.00	100	51207
36	NTP336LD	152.00	200	51208
40	NTP340LD	162.00	200	51209
	Mains: Converti-Fuse			
4	NTP304FD	$62.00	30	51202
8	NTP308FD	74.00	60	51203
12	NTP312FD	86.00	60	51204
16	NTP316FD	102.00	100	51205
20	NTP320FD	114.00	100	51206
24	NTP324FD	126.00	100	51207
28	NTP328FD	138.00	100	51208
32	NTP332FD	150.00	100	51209
36	NTP336FD	178.00	200	51211
40	NTP340FD	190.00	200	51212
	Mains: Fusible "R.B." Switch			
4	NTP304SFD	$80.00	30	51203
8	NTP308SFD	90.00	60	51204
12	NTP312SFD	102.00	60	51205
16	NTP316SFD	122.00	100	52107
20	NTP320SFD	134.00	100	51208
24	NTP324SFD	146.00	100	51209
28	NTP328SFD	158.00	100	51210
32	NTP332SFD	170.00	100	51211
36	NTP336SFD	218.00	200	51212
40	NTP340SFD	230.00	200	51213

Single Door
†30-Amp. Tumbler Switch Fuses
Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
NTP304L	$34.00	30	51200
NTP308L	40.00	60	51201
NTP312L	50.00	60	51202
NTP316L	74.00	100	51203
NTP320L	84.00	100	51204
NTP324L	94.00	100	51205
NTP328L	104.00	100	51206
NTP332L	114.00	100	51207
NTP336L	140.00	200	51208
NTP340L	150.00	200	51209
Mains: Converti-Fuse			
NTP304F	$46.00	30	51202
NTP308F	58.00	60	51203
NTP312F	70.00	60	51204
NTP316F	90.00	100	51205
NTP320F	102.00	100	51206
NTP324F	114.00	100	51207
NTP328F	126.00	100	51208
NTP332F	138.00	100	51209
NTP336F	166.00	200	51211
NTP340F	178.00	200	51212
Mains: Fusible "R.B." Switch			
NTP304SF	$64.00	30	51203
NTP308SF	74.00	60	51204
NTP312SF	86.00	60	51205
NTP316SF	110.00	100	51207
NTP320SF	122.00	100	51208
NTP324SF	134.00	100	51209
NTP328SF	146.00	100	51210
NTP332SF	158.00	100	51211
NTP336SF	206.00	200	51212
NTP340SF	218.00	200	51213

Single Door
30-Amp. Plug Fuses Only
Mains: Lugs Only

Cat. No.	Each	Amp. Mains	Box No.
NP316L	$56.00	100	51201
NP324L	66.00	100	51202
NP332L	76.00	100	51203
NP340L	106.00	200	51204
Mains: Converti-Fuse			
NP308F	$60.00	60	51202
NP316F	80.00	100	51203
NP324F	90.00	100	51204
NP332F	105.00	100	51205
NP340F	136.00	200	51207
Mains: Fus. "R.B." Switch			
NP308SF	$74.00	60	51203
NP316SF	95.00	100	51205
NP324SF	108.00	100	51206
NP332SF	120.00	100	51207
NP340SF	166.00	200	51208

2-Wire Mains, 125 Volts
2-Wire Branches, 125 Volts, Double-Pole

Using Automatic Overcurrent Protective Devices in Both Legs
No Neutral Bar

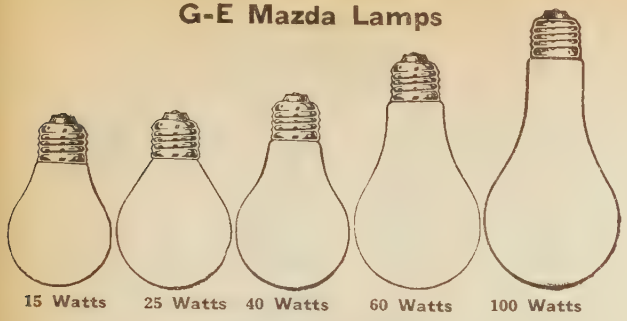
Mains: Lugs Only					**Mains: Lugs Only**				**Mains: Lugs Only**				**Mains: Lugs Only**			
4	AB204L	$70.00	50	51201	4	TP204LD	$62.00	60	51201	TP204L	$42.00	60	51201				
6	AB206L	96.00	100	51202	6	TP206LD	68.00	100	51202	TP206L	52.00	100	51202				
8	AB208L	120.00	100	51203	8	TP208LD	78.00	100	51203	TP208L	62.00	100	51203	P208L	$45.00	100	51201
10	AB210L	146.00	100	51204	10	TP210LD	88.00	100	51204	TP210L	72.00	100	51204				
12	AB212L	174.00	200	51205	12	TP212LD	98.00	200	51205	TP212L	82.00	200	51205	P212L	52.00	200	51202
14	AB214L	200.00	200	51206	14	TP214LD	110.00	200	51206	TP214L	94.00	200	51206				
16	AB216L	226.00	200	51207	16	TP216LD	120.00	200	51207	TP216L	104.00	200	51207	P216L	60.00	200	51203
18	AB218L	256.00	200	51208	18	TP218LD	130.00	200	51208	TP218L	114.00	200	51208				
20	AB220L	282.00	200	51209	20	TP220LD	140.00	200	51209	TP220L	124.00	200	51209	P220L	70.00	200	51204
					Mains: Converti-Fuse				**Mains: Converti-Fuse**				**Mains: Converti-Fuse**			
					4	TP204FD	$74.00	60	51203	TP204F	$58.00	60	51203	P204F	$54.00	60	51202
					6	TP206FD	86.00	100	51204	TP206F	70.00	100	51204				
					8	TP208FD	96.00	100	51205	TP208F	80.00	100	51205	P208F	68.00	100	51203
					10	TP210FD	106.00	100	51206	TP210F	90.00	100	51206				
					12	TP212FD	126.00	200	51208	TP212F	110.00	200	51208	P212F	85.00	200	51205
					14	TP214FD	136.00	200	51209	TP214F	120.00	200	51209				
					16	TP216FD	146.00	200	51210	TP216F	130.00	200	51210	P216F	95.00	200	51206
					18	TP218FD	156.00	200	51211	TP218F	140.00	200	51211				
					20	TP220FD	166.00	200	51212	TP220F	150.00	200	51212	P220F	105.00	200	51207
Mains: Circuit Breaker					**Mains: Fusible "R.B." Switch**				**Mains: Fusible "R.B." Switch**				**Mains: Fus. "R.B." Switch**			
4	AB204AB	$92.00	50	51203	4	TP204SFD	$88.00	60	51204	TP204SF	$72.00	60	51204	P204SF	$70.00	60	51203
6	AB206AB	139.00	100	51205	6	TP206SFD	108.00	100	51206	TP206SF	92.00	100	51206				
8	AB208AB	163.00	100	51206	8	TP208SFD	118.00	100	51207	TP208SF	102.00	100	51207	P208SF	80.00	100	51205
10	AB210AB	189.00	100	51207	10	TP210SFD	128.00	100	51208	TP210SF	112.00	100	51208				
12	AB212AB	284.00	200	‡51210	12	TP212SFD	160.00	200	51209	TP212SF	144.00	200	51209	P212SF	120.00	200	51206
14	AB214AB	310.00	200	‡51211	14	TP214SFD	170.00	200	51210	TP214SF	154.00	200	51210				
16	AB216AB	336.00	200	‡51212	16	TP216SFD	190.00	200	51211	TP216SF	174.00	200	51211	P216SF	130.00	200	51207
18	AB218AB	362.00	200	‡51213	18	TP218SFD	200.00	200	51212	TP218SF	184.00	200	51212				
20	AB220AB	388.00	200	‡51214	20	TP220SFD	210.00	200	51213	TP220SF	194.00	200	51213	P220SF	140.00	200	51208

*Prices based on 15-ampere breakers. No increase for 20 and 25-ampere breakers. For 35 and 50-ampere breakers, add $1.00 for single-pole, $2.00 for double-pole. Add increased mains, if required. ‡6-inch deep box.

†Panels with cartridge fuses instead of plug fuses can be furnished at no additional charge. For Cat. No. substitute NTC or TC for NTP or TP.

Cat. Nos. and prices include panel (less fuses), barriers and code gauge steel cabinets.

G-E Mazda Lamps



15 Watts 25 Watts 40 Watts 60 Watts 100 Watts

General Service
Inside Frosted
110, 115 and 120 Volts
Medium Screw Base

Watts	Each	Bulb	Over All Length In.	Standard Package
15	$.20	A-17	3 5/8	120
25	.20	A-19	3 15/16	120
*40	.20	A-19	4 1/4	120
*60	.20	A-21	4 15/16	120
*75	.20	A-21	5 5/16	60
*100	.25	A-23	6 1/16	60

*Mazda C (gas filled) lamps. Should not be generally used out of doors unless protected from rain or snow.

Flametint, Ivory and Old Rose—Inside Tinted
110, 115 and 120 Volts
Medium Screw Base

Watts	Each	Bulb	Over All Length In.	Standard Package
25	$.25	A-19	3 15/16	120
40	.25	A-21	4 7/16	120

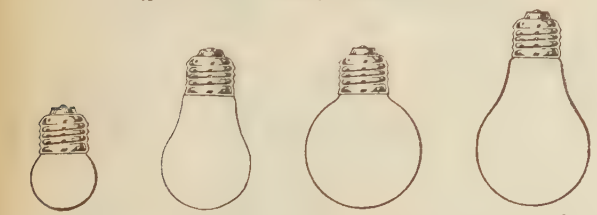
Country Home Service
Inside Frosted

Orders should specify 28-32 volts and country home lighting to distinguish from train lighting lamps. The prices apply only to lamps which are designed for an average voltage, as determined by the manufacturer, suitable for operation on 28-32 volt circuits, and do not apply to lamps ordered for individual voltages within the range.

28-32 Volts
Medium Screw Base

Watts	Each	Bulb	Over All Length In.	Standard Package
15	$.25	A-17	3 5/8	120
25	.25	A-19	3 15/16	120
50	.27	A-21	4 15/16	120
100	.40	A-23	6 1/16	60

Type D Large Lamps
110, 115 and 120 Volts, Medium Screw Base



G-11 Bulb A-15 Bulb G-19 Bulb A-19 Bulb

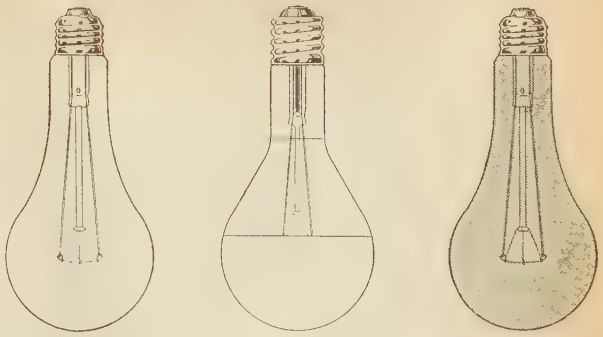
The lamps listed below will be supplied only as specified except that the extra charges for etching will be supplied upon request.

Watts	Each	Bulb	Over All Length In.	Std. Pkg.
7 1/2	$.10	G-11 Outside Coated White or Red	2 1/4	60
15	.10	A-15 Inside Frosted	3 1/2	60
*30	.10	*G-19	3 1/2	60
60	.10	A-19 Inside Frosted	4 5/8	60

*Supplied inside frosted or outside colored in red, green, amber-orange, rose, white, ivory or flametint.

A standard package consists of 60 lamps of the same wattage, voltage and finish, and lamps of different wattage, voltage or finish may not be combined to make a standard package except that 30-watt, G-19 lamps of different colors (but not inside frosted) may be combined to make a standard package provided the quantity of lamps of any one color is a multiple of six.

G-E Mazda Lamps



150 Watts, Clear 300 Watts, White Bowl 150 Watts, Daylight

General Service
110, 115 and 120 Volts

Medium Screw Base

Watts	Clear Each	Inside Frosted Each	‡White Bowl Each	Bulb	†Approx. Lumens	Over All Length Inches	Std. Pkg.
150	$.60	$.65	$.65	PS-25	2400	6 15/16	24
200	.80	.85	.85	PS-30	3400	8 1/8	24
Mogul Screw Base							
300	$1.25	$1.35	$1.35	PS-35	5400	9 7/16	24
500	2.00	2.15	2.15	PS-40	9700	9 13/16	12
* 750	3.75	....	3.95	PS-52	14500	13 1/8	6
*1000	4.00	....	4.20	PS-52	20000	13 1/8	6
*1500	5.75	....	5.95	PS-52	32000	13 1/8	6

*For use in base up or within 45° of base up position only. Clear lamps also suitable for floodlighting service.
†Approximate for clear and inside frosted lamps. For white bowl lamps lumens are approximately 3 per cent less.
‡White bowl lamps should be burned base up only.

Daylight (Blue Glass)

Made of special blue glass to produce light approximating average daylight quality.

Medium Screw Base

Watts	Clear Each	Inside Frosted Each	Bulb	Approx. Lumens	Over All Length Inches	Std. Pkg.
60	....	$.38	A-21	....	4 15/16	120
100	....	.40	A-23	....	6 1/16	60
150	$1.00	1.10	PS-25	1550	6 15/16	24
200	1.30	1.40	PS-30	2200	8 1/8	24
Mogul Screw Base						
300	$1.85	$1.95	PS-35	3500	9 7/16	24
500	2.85	3.00	PS-40	6300	9 13/16	12

High Voltage Service
220, 230, 240, 250 and 260 Volts

Medium Screw Base

Watts	Clear Each	Inside Frosted Each	‡White Bowl Each	Bulb	†Approx. Lumens	Over All Length Inches	Std. Pkg.
25	....	$.26	....	A-19	.....	3 15/16	120
** 50	....	.26	....	A-21	.....	4 7/16	120
100	....	.43	....	A-23	.....	6 1/16	60
200	$1.00	1.10	$1.10	PS-30	2700	8 1/8	24
Mogul Screw Base							
300	$1.50	$1.60	$1.60	PS-35	4300	9 7/16	24
500	2.40	2.55	....	PS-40	7800	9 13/16	12
* 750	4.25	....	....	PS-52	12500	13 1/8	6
*1000	4.75	....	....	PS-52	18000	13 1/8	6

*Not recommended for use in other than base up or within 45° of base up position.
**Can be obtained in 275 and 300 volts for mine lighting service at 40 cents each.
†Approximate for clear and inside frosted lamps. For white bowl lamps lumens are approximately 3 per cent less.
‡White bowl lamps should be burned base up only.

G-E Mazda Lamps

Decorative Service

110, 115 and 120 Volts

S Bulb

F-10 Bulb

F-15 Bulb

G Bulb

Watts	Each	Bulb	Screw Base	Over All Length Inches	Standard Package
*10	$.25	S-11	Intermediate	2 5/16	120
†15	.35	F-10 Flametint	Intermediate	3 1/8	60
‡25	.20	F-15 Flametint	Medium	4 1/2	120
§25	.30	G-18 1/2 White	Medium	3 9/16	120
§25	.35	G-25 White	Medium	4 7/16	60
§40	.35	G-25 White	Medium	4 7/16	60

*Clear or inside colored in red, blue, green, flametint, yellow, amber-orange, white; also suitable for sign lighting.

†Flametint, white or ivory finish can be supplied with candelabra or intermediate screw base at 35 cents.

‡Can be supplied in white or ivory at 20 cents.

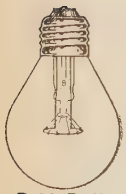
§Can be supplied in flametint at 5 cents extra.

Limited Service

110, 115 and 120 Volts

Vibration Service—Clear

Medium Screw Base


P-19 Bulb

Recommended where vibration prevails, such as is produced by heavy or high speed machinery. Not recommended for horizontal burning.

Watts	Each	Bulb	Over All Length Inches	Std. Pkg.
50	$.25	P-19	3 15/16	120

Rough Service—Inside Frosted

Medium Screw Base

A-19 Bulb

Recommended where subjected to rough handling, such as in extension cord service.

Watts	Each	Bulb	Over All Length Inches	Std. Pkg.
50	$.37	A-19	3 15/16	120

Tubular—Clear

T-8 Bulb

T-6 1/2 Bulb

Intermediate Screw Base

Watts	Each	Bulb	Over All Length Inches	Std. Pkg.
25	$.45	T-6 1/2	5 1/2	60

Medium Screw Base

Watts	Each	Bulb	Over All Length Inches	Std. Pkg.
25	$.35	T-10	5 5/8	60
40	.90	T-8	11 7/8	24

T-10 Bulb

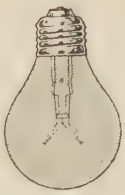
G-E Mazda Lamps

Sign Service

110, 115 and 120 Volts

S-11 Bulb

S-14 Bulb


A-19 Bulb

A-21 Bulb

Intermediate Screw Base

Watts	Each	Bulb	Over All Length Inches	Standard Package
*10	$.25	S-11	2 5/16	120

Medium Screw Base

Watts	Each	Bulb	Over All Length Inches	Standard Package
†10	$.20	S-14 Clear	3 1/2	120
†25	.20	A-19 Inside Frosted	3 15/16	120
25	.40	A-19 Clear Daylight	3 15/16	120
40	.20	A-21 Inside Frosted	4 7/16	120
50	.40	A-19 Clear Daylight	3 15/16	120

*Supplied clear or inside colored in red, blue, green, yellow, amber-orange, flametint and white. Also suitable for decorative lighting.

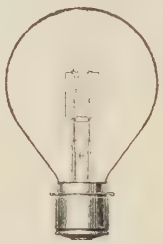
†Supplied also inside colored in red, blue, green, yellow and amber-orange at 25 cents.

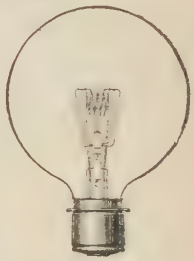
Spotlight Service

These lamps can be burned in any position except within 45° of vertically base up.

When ordering specify service.

110, 115 and 120 Volts


P-Bulb

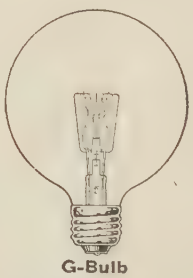

G-Bulb

Medium Prefocus Base

Watts	Each	Bulb	‡Light Center Length Inches	Over All Length Inches	Standard Package
* 100	$1.15	P-25	2 3/16	5	60
* 250	1.90	G-30	2 3/16	5 3/8	24
* 400	3.15	G-30	2 3/16	5 3/8	24
Mogul Prefocus Base					
†1000	$7.15	G-40	3 15/16	8 7/16	12

Floodlight Service

110, 115 and 120 Volts


G-Bulb

Medium Screw Base

Watts	Each	Bulb	‡Light Center Lgth. In.	Over All Lgth. In.	Std. Pkg.
250	$1.75	G-30	3	5 1/8	24

Mogul Screw Base

Watts	Each	Bulb	‡Light Center Lgth. In.	Over All Lgth. In.	Std. Pkg.
500	$3.25	G-40	4 1/4	7 1/16	12
1000	6.75	G-40	5 1/4	7 7/8	12

*Medium screw base can be supplied with a light center length of 3 inches at 15 cents less than price shown.

†Mogul screw base lamp, with light center length of 4 1/4 or 5 1/4 inches, can be supplied at $6.75. Orders should specify light center length.

‡Light center length for prefocus base is distance from center of light source to top of base fin; for screw base, to base cap.

G-E Train Service Mazda Lamps

Inside Frosted
32 and 64 Volts
Medium Screw Base

A-Bulb

Orders should be marked "train lighting" to distinguish from country home lighting.

Watts	Each	Bulb	Over All Length Inches	Std. Pkg.
15	$.25	A-17	3 5/8	120
25	.25	A-19	3 15/16	120
50	.27	A-21	4 15/16	120
100	.40	A-23	6 1/16	60

Locomotive Cab Service—Clear

34 Volts
Medium Screw Base

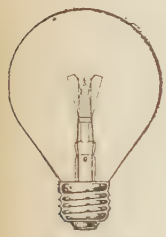
S-14 Bulb

Orders should specify "locomotive cab."

Watts	Each	Bulb	Over All Length Inches	Std. Pkg.
15	$.22	S-14	3 1/2	120

Locomotive Headlight Service—Clear

32 Volts
Medium Screw Base


P-25 Bulb

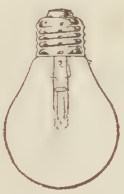
These lamps can be burned in any position except within 45° of vertically base up. Light center length, 3 inches.

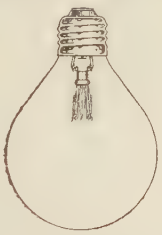
Watts	Each	Bulb	Over All Length Inches	Std. Pkg.
100	$1.00	P-25	4 3/4	60
250	1.50	P-25	4 3/4	60

G-E Street Railway Service Mazda Lamps

S-Bulb

A-Bulb, Ins. Fr.


A-Bulb


P-Bulb

All lamps fitted with medium screw base except the 301-watt lamp which is fitted with mogul screw base.

***105, 110, 115, 120, 125 and 130 Volts**

Watts	Each	Amp.	Bulb	Light Center Length Inches	Over All Length Inches	Std. Pkg.
23	$.25	...	S-17 Clear	...	4 5/8	120
†36	.20	...	A-21 Inside Frosted	...	4 7/16	120
†56	.27	...	A-21 Inside Frosted	...	4 7/16	120
			Headlight			
23	$.60	...	A-19 Clear	2 3/16	3 15/16	120
36	.60	...	A-19 Clear	2 3/16	3 15/16	120
56	.85	...	P-25 Clear	2 1/16	4 3/4	60
94	1.10	...	P-25 Clear	2 1/16	4 3/4	60
			Arc-Resisting			
101	$.50	...	A-23 Inside Frosted	...	6 1/16	60
201	.95	...	PS-30 Clear	...	8 1/8	24
301	1.55	...	PS-35 Clear	...	9 7/16	24
			30 Volts			
‡	$.45	1.0	A-19 Inside Frosted	...	3 15/16	120
‡	.55	1.6	A-21 Inside Frosted	...	4 7/16	120

*These lamps are for use 5 in series on 525, 550, 575, 600, 625 and 650 volts.

†These lamps, if burned horizontally, will not give as good service as when burned in a vertical position.

‡Mazda C street railway cut-out lamps. These are for use approximately 20 lamps in series on 600-volt circuits. Where circuit voltage is greater or less than 600 volts, sufficient lamps may be installed or omitted in order to make the total lamp voltage equal to that of the circuit.

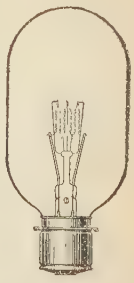
G-E Projection Service Mazda Lamps

100, 105, 110, 115 and 120 Volts

T-8 Bulb
100 Watts

T-10 Bulb
200 Watts

T-10 Bulb
300 Watts


T-20 Bulb
500 Watts

These lamps must burn base down.

Single Contact Bayonet Candelabra Base

Watts	Each	Bulb	§Light Center Length Inches	Over All Length Inches	Standard Package
50	$1.10	T-8	1 3/8	3 1/8	24
100	1.50	T-8	1 3/8	3 1/8	24
		Medium Prefocus Base			
†200	$2.20	T-10	2 3/16	5 3/4	24
*300	2.90	T-10	2 3/16	5 3/4	24
†500	3.00	T-20	2 3/16	5 3/4	6
		Mogul Prefocus Base			
‡1000	$6.50	T-20	3 7/16	9 1/2	6

*For use with air blast cooling. Should be used only in equipment designed to give an adequate cooling; otherwise unsatisfactory lamp performance and damage to equipment may result.

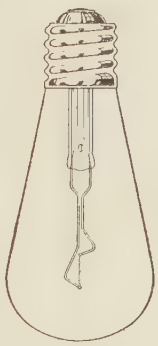
†Medium screw base can be supplied with a light center length of 3 inches at the same price.

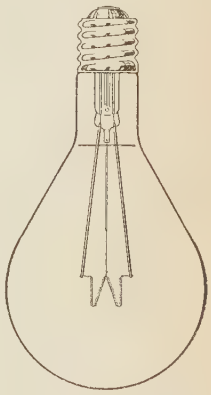
‡Mogul screw base can be supplied with a light center of 4 3/4 inches at the same price.

§Light center length for prefocus base is distance from center of light source to top of base fin; for bayonet base to top of base pins; for screw base to base cap.

G-E Street Lighting Service Mazda Lamps

Clear—With Mogul Screw Base


S-Bulb


PS-Bulb

The 15 and 20-ampere lamps are designed for base up burning position. Lamps ordered for base down burning position may be supplied at the same price. The 25000 lumen lamp is not recommended for base down burning.

Nominal c.p. is one-tenth of lumen rating.

Amps.	Each	Lumens	Average Volts	Bulb	Light Center Length Inches	Over All Length Inches	Std. Pkg.
6.6	$.75	1000	9.8	S-24 1/2	5 3/8	7 1/8	60
6.6	1.45	2500	22.3	PS-35	7	9 7/16	24
6.6	1.70	4000	34.6	PS-35	7	9 7/16	24
6.6	2.25	6000	51.1	PS-40	7	9 13/16	12
15	1.70	4000	14.3	PS-35	*7	9 7/16	24
20	2.25	6000	15.3	PS-40	*7	9 13/16	12
20	2.80	10000	25.4	PS-40	*7	9 13/16	12
20	4.00	15000	38.5	PS-40	*7	9 13/16	12
20	7.00	25000	62.2	PS-52	†9 1/2	13 1/8	6

Base down lamp, light center length: *6 1/4 in.; †8 1/4 in.

G-E Mazda Photo Lamps

Photoflash Lamps

A-Bulb

Eliminates smoke, ashes and sparks from flashlight photography. No odor. Easy to operate and noiseless. Subjects do not close their eyes, so instantaneous is the flash.

The clear glass bulb contains a quantity of crumpled aluminum foil in an atmosphere of oxygen. A short filament is mounted within the mass of foil and serves to start the flash.

With medium screw base.

No.	Each	Voltage Range for Operation	Bulb	Diam. Bulb In.	Max. Over All Length In.	Std. Pkg.
*10	$.15	3 to 125	A-19 Clear	$2\frac{3}{8}$	$4\frac{5}{8}$	60
*20	.25	3 to 125	A-23 Clear	$2\frac{7}{8}$	$6\frac{1}{16}$	60

*Flash with two (or more) cells of flashlight or dry battery, or house current.

Photoflood Lamp

A-21 Bulb

This lamp offers a new and economical source of diffused light. In appearance it resembles a regular 60-watt lamp used for house lighting. If operated at 115 volts a.c. or d.c. it draws approximately 250 watts, but in proper reflecting equipment, this new lamp is actinically as effective as a 750-watt lamp.

Rated life, 120 minutes at 115 volts.

With medium screw base.

Voltage Range for Operation	Each	Bulb	Diam. Bulb Inches	Maximum Over All Length Inches	Std. Pkg.
105–120	$.35	A-21 Inside Frosted	$2\frac{5}{8}$	$4\frac{15}{16}$	60

G-E Sunlight Lamps

S-2 Bulb

Sunlight lamps give the benefits of outdoor midsummer sunlight, indoors any time of the year. Will not operate on ordinary house lighting circuits except when used in special equipment designed to produce correct starting and operating voltage.

Types S-1 and S-2 are accepted by the Council of Physical Therapy of the American Medical Association.

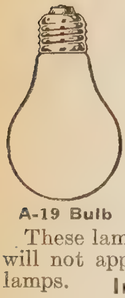
*Metal cap supplied with lamp.

These lamps will not be consigned and sales or purchases will not apply on agency or purchase contracts for other lamps.

Approx. Watts	Each	Approx. Volts	Bulb	Over All Length Inches	Base	Std. Pkg.
Type S-1 Mazda Lamp						
400	$7.50	14.5	PS-22 Inside Frosted	$6\frac{7}{16}$	Mogul	6
Type S-2 Mazda Lamp						
130	3.75	15	*A-17 Inside Frosted	$4\frac{7}{8}$	Spec.	12
Type G-1 Lamp						
34	3.50	17	A-21 Clear	$4\frac{1}{4}$	Med.	12
Type G-5 Lamp						
75	5.00	15	G-35 Clear	$6\frac{13}{16}$	Spec.	6

G-E Mazda CX Lamps

110, 115 and 120 Volts



A-19 Bulb

Manufactured with a special glass bulb which transmits most of the ultraviolet radiation emitted by filament. Mazda CX lamps are made available for the purpose of providing a source of infrared radiation combined with mild ultraviolet.

Lamps larger than 60 watts should not be burned in key sockets or those having paper or fibre insulation. Such sockets may not withstand heat generated by lamps.

These lamps will not be consigned and sales or purchases will not apply on agency or purchase contracts for other lamps.

Watts	Each	Bulb	Diameter Bulb Inches	Maximum Over All Length, In.	Standard Package
Inside Frosted—Medium Screw Base					
60	$.60	A-19	$2\frac{3}{8}$	$4\frac{5}{8}$	48
250	1.25	G-30	$3\frac{3}{4}$	$6\frac{1}{8}$	24
Inside Frosted—Mogul Screw Base					
500	$2.25	G-38	$4\frac{3}{4}$	$7\frac{5}{8}$	12

G-E Mazda Lamps

Natural Colored Lamps

The four lamps in natural colored clear glass bulbs listed below cover a large percentage of present demand for natural colored lamps. The prices shown are for the manufacturer's standard colored glass only.

Watts	Volts	Bulb	*Ruby Each	Green, †Blue and *Amber Each
10	110, 115, 120	S-14	$.50	$.40
25	110, 115, 120	A-19	.50	.40
40	110, 115, 120	A-21	.50	.40
¶60	110, 115, 120	A-21	.55	.45

*Natural ruby and natural amber lamps are regularly furnished in the light shade. Dark ruby and dark amber lamps used in photographic work will be furnished, only when definitely specified, at the same price.

†Does not include daylight blue or photographic blue.

¶This lamp not to be burned in enclosing globe.

Extra Charges for Special Features

White, All Frosted and White Bowl Lamps

Clear or Inside Frosted Lamps Each	Add. Charge for White, All Frosted or White Bowl Each	Clear or Inside Frosted Lamps Each	Add. Charge for White, All Frosted or White Bowl Each
Less than $1.00	$.05	$4.00 to $4.99	$.25
$1.00 to 1.99	.10	5.00 to 5.99	.30
2.00 to 2.99	.15	6.00 to 6.99	.35
3.00 to 3.99	.20	7.00 to 7.99	.40

The above prices apply only for the manufacturer's standard spray coatings defined below.

White.—All-over coating of heavy density. Standard for all Mazda B lamps and all Mazda C lamps in A-23 and smaller diameter bulbs, except as covered under All Frosted below.

All Frosted.—All-over coating of light density. Standard for all Mazda C lamps in S-24½ and larger diameter bulbs; for tubular lamps listed under Limited Service; for all lamps in daylight and natural colored bulbs.

White Bowl.—Bowl white coating of light, heavy, or extra heavy density used in accordance with the following:

1. Light density for all lamps in daylight or natural colored bulbs;
2. Heavy density for all Mazda B lamps and all Mazda C lamps in S-24½ and smaller bulbs, except as in 1;
3. Extra heavy density for all Mazda C lamps in PS-25 and larger bulbs, except as in 1.

Etching.—Additional charges for etching letters or designs may be obtained upon application. Style of lettering or design should accompany such application.

Orders for large lamps with customer's etching may be filled either short or in excess, within the limits of 5%; except that on orders for less than 40 lamps the shortage or excess may equal but not exceed two lamps.

Etched lamps are not rejectable by the purchaser under the provisions of the standard specifications.

Voltage.—Lamps of 105, 125 and 130 volts can be supplied at the same prices as lamps of 110, 115 and 120 volts. The prices for voltages other than 105, 110, 115, 120, 125 and 130 volts may be obtained upon application.

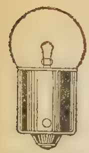
Prices of lamps in the 200 to 260 volt range other than 220, 230, 240, 250 and 260 upon application.

Special Basing.—The prices listed cover only lamps fitted with unskirted bases unless otherwise indicated. The prices of lamps fitted with bases other than listed may be obtained upon application.

Special Lamps.—Any lamp requiring a change in construction from the standard, such as shape or color of bulb, tipped bulb, number of loops in filament, number of anchors, wattage, voltage, amperage, etc., will take a special price, which may be obtained upon application.

As it is impossible to always produce an exact quantity of any special lamps ordered, or of any lamps to be made tipped, when listed as tipless, or of any lamps to be furnished with natural colored, coated colored or tinted bulbs, all such orders may be filled either short or in excess, within the limits of 10 per cent, except that in orders for 20 lamps or less, the shortage or excess will not exceed two lamps.

Miniature Mazda Lamps

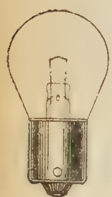


Mazda-63
Mazda-81

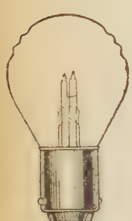
Base abbreviations: Min.—miniature screw base; S. C.—single contact bayonet candelabra base; D. C.—double contact bayonet candelabra base.

Ten lamps constitute a unit package quantity.

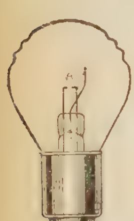
Automobile Service (Including Lamps for Ford Cars)



Mazda-87



Mazda-1000
Mazda-1110
Mazda-1116

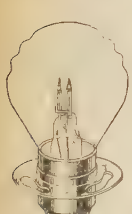


Mazda-1158

Mazda Lamp No.	Each	Bulb	Base	Volts	C.P.
63	$.10	G-6	S. C.	6–8	3
64	.12	G-6	D. C.	6–8	3
67	.22	G-6	S. C.	12–16	3
68	.22	G-6	D. C.	12–16	3
81	.12	G-6	S. C.	6–8	6
87	.19	S-8	S. C.	6–8	15
1000	.24	S-10	D. C.	6–8	32 / 32
1110	.22	S-10	D. C.	6–8	21 / 21
1116	.26	S-10	D. C.	6–8	32 / 21
1120	.55	S-10	D. C.	12–16	21 / 21
1129	.21	S-10	S. C.	6–8	21
1133	.25	S-10	S. C.	6–8	32
1141	.40	S-10	S. C.	12–16	21
1142	.40	S-10	D. C.	12–16	21
1158	.22	S-10	D. C.	6–8	21 / 3
2320	.45	S-10	†D. C.	6–8	32 / 21
2330	.45	S-10	†D. C.	6–8	32 / 32

†D.C bayonet prefocused base. Can be used only on cars equipped for prefocused base lamps.

Flashlight Service



Mazda-2320
Mazda-2330

Mazda Lamp No.	Each	Bulb	Base	Volts	Amps.
1	$.09	FE-3¾	Min.	2.2	.25
10	.09	G-3½	Min.	2.3	.27
13	.09	G-3½	Min.	3.8	.30
14	.09	G-3½	Min.	2.5	.30
31	.12	G-4½	Min.	6.2	.30
*701	.07	FE-3¾	Min.	2.2	.26
*710	.07	G-3½	Min.	2.3	.30
*713	.07	G-3½	Min.	3.8	.35
*714	.07	G-3½	Min.	2.5	.35

Mazda-1

*Packed 50 lamps of a type to a platform which constitutes the minimum quantity which will be shipped by the manufacturer. No voltage rating appears on the base of these lamps. The type of lamp is designated by the bead colors as follows: Mazda lamp No. 701, white bead; No. 710, purple bead; No. 713, green bead; No. 714, blue bead.

Standard Dry Battery Service

Mazda-26
Mazda-31

Mazda Lamp No.	Each	Bulb	Base	Volts	Amps.
19	$.10	G-4½	Min.	1.25	.60
35	.11	G-5½	Min.	2.4	.80

Trainmen's and General Purpose Hand Lantern Service

26	$.14	G-4½	Min.	5.0	.15

Radio Panel and Miscellaneous Service

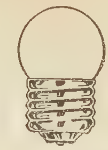
Mazda-40
Mazda-41

40	$.09	T-3¼	Min.	6–8	.15
41	.09	T-3¼	Min.	2.5	.50

Neon Glow Lamps

105-125 Volt Service

S-14



G-10

T-4½

This orange-red lamp is used wherever economy or low level illumination is desirable. Will not burn out; after long use bulb gradually blackens. Useful life, 3000 hours.

Contained in bulb is Neon gas of a definite pressure and a pair of metallic electrodes.

Minimum operating voltage below label, 50 volts a.c., 10 volts d.c., except where noted on ½-watt G-10 bulb.

Lamps furnished without resistance only when with double contact bayonet base of corresponding size.

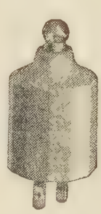
On d.c. only one (the negative) electrode glows but gives the same c.p. as do both electrodes on a.c.

Sprayed red or yellow finish, 5 cents extra.

Standard package, 10.

Watts	Each	Approx. Resist. in Base Ohms	Average Current Rating Amps.	Approx. C.P. Rating	Electrode Shape	Maximum C.P. Direction
S-14 Bulb—Clear Finish—Medium Screw Base						
2	$.50	3200	.020	.5	Plates	End On
G-10 Bulb—Clear Finish—Medium Screw Base						
½	$.40	3500	.005	.05	Cylinder	At Side
The above lamp is for 110 volts a.c. only. Can be supplied in 1-watt size for 210–240-volt service.						
1	$.40	3500	.010	.05	Cyl. & Helix.	All
G-10 bulb with skirted candelabra base at 5 cents extra.						
T-4½ Bulb—Clear Finish—Candelabra Screw Base						
¼	$.40	30000	.002	...	Hemisphere	All

Hamilton Beach Safety Night Lights



Provides a sufficient illumination to fill a room 12x12 feet with a soft moonlight glow making all objects visible. Ideal for nursery, bathroom, hall, basement, sick room, etc. Factories, hospitals, stores and hotels use this light to save turning on high wattage bulb. Uses less than one watt per hour.

Light consists of a transformer that reduces a 110-volt current to 1.9 volts. Transformer is enclosed in ivory Plaskon shell. Bulb is 3.8 volts operating at one-half voltage. Regular flashlight bulbs are used for replacement.

Operates on a.c., 60 cycles. Will not operate on d.c.
Length over all including prongs, about 3½ inches.
Packed 6 in a display carton.
Approximate shipping weight of six, 2 pounds.

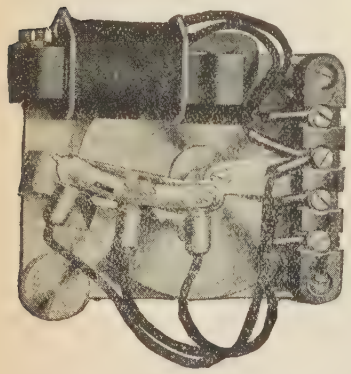
Each **$1.00**

Leland Flashers

It is good advertising to flash a sign and real economy, as the current cost for the lamps and tubes is reduced from 30 to 50 per cent and their life nearly doubled.

All Leland Flashers are furnished with mercury-to-mercury switches enclosed in oxygen-free containers.

Class 131 Unit Type Junior Flashers
On-and-Off, Alternating or Color Changing



Operated by means of an intermittent induction disc motor. Motor circuit is led through mercury switch so that when flasher, in operation, breaks the sign circuit it also breaks the flasher-motor circuit. The mechanism then returns by gravity action to its starting position from where the cycle is repeated.

The flasher coil draws only 3 or 4 watts and is on only half of the time—a 50 per cent saving in the cost of current.

The flasher parts are corrosion-proof; steel parts are cadmium-plated. Motor bearings are of the ball thrust type. Oiling is virtually unnecessary.

Can be mounted inside of advertising machines, small signs or displays. Mounting plate is 4⅜ inches wide and 3¾ inches high. For a.c. only.

With indoor cabinet 6 inches high, 8 inches wide and 3 inches deep. Cabinet for No. 131–122 flasher is 4 inches deep. Outdoor cabinet, galvanized, $8.00 extra.

Cat. No.	Each	Circuit Capacity Amperes	No. of Circuits
131–121	**$13.00**	12	1
131–12A	**15.00**	12	2-Alt.
131–122	**18.00**	12	2-Sim.
131–241	**16.00**	24	1

Shipping weight, 8 pounds. Price includes indoor cabinet; without cabinet, deduct $1.50.

Current specifications: 110 volts, a.c. any cycle. For d.c. specify Class 132 and add $8.00 to price.

Speed is adjustable between 20 and 40 flashes per minute. On time is quickly adjustable between ½ and ⅔ of a cycle. High speed with maximum of 60 flashes per minute, $2.00 extra; low speed with minimum of 10 flashes per minute, $6.00 extra.

Class 101 Unit Type On-and-Off Flashers

Cat. No.	Each	Circuit Capacity Amperes	No. of Circuits	Total Load Amperes
101–241	**$30.00**	24	1	24
101–24A	**33.00**	24	2-Alt.	48
101–242	**37.00**	24	2	48
101–243	**44.00**	24	3	72
101–501	**35.00**	50	1	50
101–502	**50.00**	50	2	100

Speed adjustable between 13 to 20 flashes per minute.

Shipping weight, 14 pounds. Price includes indoor cabinet; without cabinet, deduct $2.00.

Outdoor Housings

	Each	Height Inches	Width Inches	Depth Inches
Class 101 Unit Type				
1 Circuit	$8.00	10	6	5
Other Types	8.00	12	8	6
Class 103 Unit Type				
4 Circuits	$8.00	12	6	4
Other Types	8.00	12	8	6
Class 107 Unit Type				
All Types	$8.00	12	8	6

Unless otherwise specified furnished for use with 110-volt a.c., 50 or 60-cycle current.

Prices on request for: D.C. 220 volts or 25 cycles; special speeds or cycles; extra circuits.

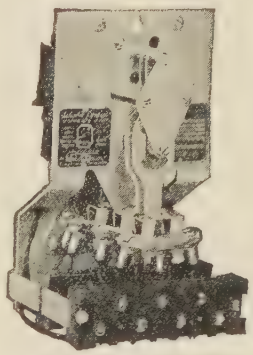
Heavy Duty and Combination Flashers

Heavy duty and combination flashers available to meet any requirement. Prices on application.

Leland Flashers

Economy and dependability of operation insured by design and construction. Induction disc motor gives maximum of power with minimum of input—2 circuit On-and-Off flasher averages 10 watts input—200 per cent reserve power; disc shaft runs in ball bearings of a combined radial and thrust type which are practically frictionless. Eccentric cams are oil-lubricated linen-bakelite to make them noiseless, wear-resisting and self-lubricating. Other bearing surfaces are bronze on steel and run at a low speed—a little oil on the various bearing surfaces, once in 6 months, is all that is required to insure continuous operation. Variation in speed is secured, without turning flasher off, by adjusting thumb screw on front.

Class 103 Unit Type Speed Flashers



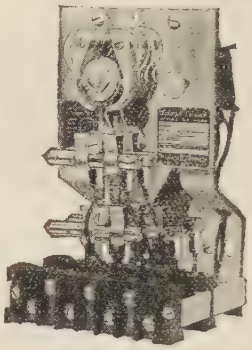
Cat. No.	Each	Cir. Cap. Amps.	No. of Cir.	Total Load Amps.
***103–34**	**$30.00**	3	4	12
***103–54**	**40.00**	5	4	20
***103–94**	**45.00**	9	4	36
***103–58**	**60.00**	5	8	40
***103–98**	**70.00**	9	8	72
†103–56	**60.00**	5	6	30
†103–96	**70.00**	9	6	54
‡103–58–8	**65.00**	5	8	40
‡103–98–8	**75.00**	9	8	72

Timing of circuits: *1 to 4; †1 to 6; ‡1 to 8.

Speed adjustable between 180 to 250 flashes per minute.

Shipping weight, 14 pounds. Price includes indoor cabinet; without cabinet, deduct $2.00.

Class 107 Unit Type Speller Flashers



Cat. No.	Each	Cir. Cap. Amps.	No. of Cir.
107–122	**$36.00**	12	2
107–123	**44.00**	12	3
107–124	**52.00**	12	4
107–125	**60.00**	12	5
107–126	**68.00**	12	6
107–242	**40.00**	24	2
107–243	**50.00**	24	3
107–244	**60.00**	24	4

Speed adjustable between 6 to 10 seconds per cycle.

Shipping weight, 14 pounds. Price includes indoor cabinet; without cabinet, deduct $2.00.

Radio Interference Elimination Devices

Description	Extra per Cir.
Condenser (Either 1 or 2 Mfd. Depending on Circuit Capacity)	**$2.50**
Choke Coil for Each 12 Amp. (100 Turns of Proper Size Wire for Load)	**2.00**
Condensers Installed in Flasher at Factory	**4.50**
Chokes, for Each 12 Amp. Installed in Flasher at factory	**4.00**
Complete Radio Interference Elimination, Chokes and Condensers in Each Circuit, Mounted in Special Cabinet at Factory, Extra per Circuit Up to 12 Amperes	**7.00**

Kontax Mercury Tubes Used in Leland Flashers

Ratings are maximum—overloading voids guarantee.

Type of Flasher	Rated Cap. Circuit Amps.	Watts	Single Acting Cat. No.	Single Acting Each	Alternating Cat. No.	Alternating Each
Class **131**	12	1320	X1229	**$3.15**	X1232	**$4.50**
	24	2640	X2429	**4.00**	.....	....
*Class **101, 107, 109, 111, 125,** or **127**	12	1320	X1222	**3.00**	X1232	**4.50**
	24	2640	X2422	**3.80**	X2432	**5.40**
	50	5500	X5022	**7.50**	.....	....
†Class **103, 105, 125** or **127**	4.5	500	X1229	**3.15**	X1234	**4.50**
	9.1	1000	X2429	**4.00**	X2434	**5.40**

*A.C. On-off or speller type. †A.C. speed border type.

Noma Straight-Line Festoon Type Christmas Tree Lighting Outfits

No. 100-F

No. 100-M.—An 8-light series outfit with patented add-on connector attached to lead wire to connect other outfits. Berry beads securely fasten lamps to tree branch. With Mazda 15-volt M-22 bell shape lamps.

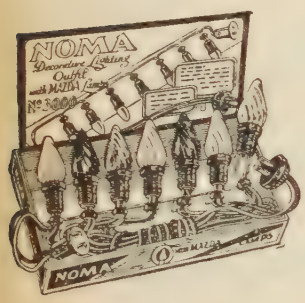
For average indoor 8 to 10-foot trees.

No. 100-M.....each **$1.15**

No. 100-F.—Same as No. 100-M except lamps. With Mazda 15-volt F-6½ new detector lamps, assorted colors. Burned out lamp glows; replace it and all lamps light up.

No. 100-F.....each **$1.50**

No. 3000 Noma 7-Light Multiple Christmas Tree Lighting Outfits



A straight-line outfit with standard add-on extension connector and adjustable Berry beads (patented).

For indoor and outdoor use; thoroughly weatherproof.

With 120-volt inside-colored Mazda lamps—assorted colors; C-9¼ intermediate base. Sockets and lamps are 18 inches apart, with 4-foot lead.

Being wired in multiple, no burnt-out lamp can affect the other lamps. Sockets are all bakelite.

No. 3000 .....each **$2.25**

No. 175 Noma Christmas Tree Holders

Completely wired with an 8-light series Mazda lamp set to illuminate the bottom of the tree, which is usually the darkest part.

This holder is exceptionally well made of rustproof metal; inside basin holds 23 pounds of water as ballast, which will keep the tree moist for days.

Equipped with leader and double duty plug. A 2-way add-on extension connector controls all lights on the tree.

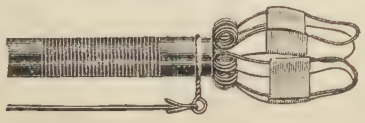
No. 175.....each **$4.00**

Adaptable Lamp Changers

Fits any style incandescent lamp. Furnished with or without steel poles.

No.	Description	Each
150	Changer Head for 15-50 Watt Lamps.....	$6.50
151	Changer Head for 50-200 Watt Lamps.....	6.50
152	Special for Lamps Up to 500 Watts. Give Size	12.00
	Steel Poles Up to 30 Feet in 5½-Ft. Sections.....	4.50

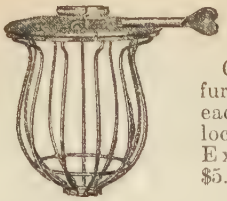
Matthews Holdfast Lamp Changers

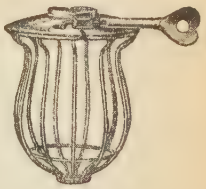


Price, No. 2 for 15–60-Watt Mazda Lamps.....each **$13.00**

Price, No. 3 for 60–150-Watt Mazda Lamps, Up to 5 Inches in Diameter.....each **15.00**

Hubbell Locking Type Lamp Guards





One key is furnished with each carton of locking guards. Extra keys, $5.00 per 100.

For Brass Sockets **For Weatherproof Sockets**

Cat. No.	Per 100	Size Lamps Watts	Style Socket	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
5685	$33.34	40–60	Brass	10	100	35
5635	51.12	100	Brass	10	100	36
5762	64.22	200	Brass	10	50	44
5730	33.34	40–60	W. P.	10	100	35
5731	51.18	100	W. P.	10	100	54
5820	68.40	200	W. P.	10	50	38

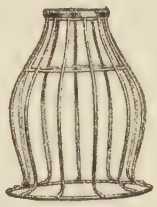
Separate baskets for Nos. 5685, 5730 guards, $18.00 per 100. Tops only, $25.00 per 100.

Separate baskets for Nos. 5635, 5731 guards, $24.00 per 100. Tops only, $32.50 per 100.

Separate baskets for Nos. 5762, 5820 guards, $33.00 per 100. Tops only for No. 5762, $38.00 per 100. Tops only for No. 5820, $42.50 per 100.

Hubbell Non-Locking Type Lamp Guards

No. 5573


No. 5485

No. 5691

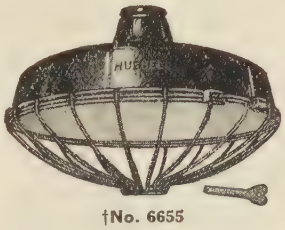
Cat. No.	Per 100	Size Lamps Watts	Style Socket	Carton	Std. Pkg.	Wt., Lbs. Std. Pkg.
5573	$32.18	60	Brass	10	100	35
5578	36.46	100	Brass	10	100	55
5485	25.74	60	Brass	10	100	27
5691	20.36	60	Brass	10	100	25
5692	24.90	100	Brass	10	100	30
5693	21.74	60	W. P.	10	100	25
5694	24.90	100	W. P.	10	100	29

Separate basket for No. 5573, $18.00 per 100. Top, $17.50 per 100.

Separate basket for No. 5578, $20.00 per 100. Top, $20.50 per 100.

Hubbell Locking Type Lamp Guards

For Bottom of Reflectors



†No. 6655

One key is furnished with each carton of locking guards. Extra keys $5.00 per 100.

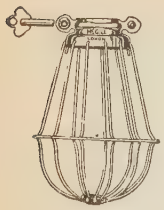
D-11606 extra long locking screws are furnished with guards to adapt them for oversize reflectors.

Cat. No.	Per 100	Size Reflectors Inches	Carton	Std. Pkg.	Wt.,Lbs. Std.Pkg.
6650	$47.60	6½	10	50	20
6652	53.36	8	10	50	25
6653	72.54	10	10	50	25
6655	91.66	12	10	50	30
*6657	111.54	14	4	20	15
*6659	146.48	16	4	20	16
*6660	148.16	18	4	20	18

*Packed in bulk.

†Reflector shown for illustration only.

Loxon Type Lamp Guards



No. 1425

Tinned wire; closed bottom; two steel hinged plates at top that snugly fit over socket bead and have locking device operated by key, which is furnished with each dozen guards. Can be furnished to fit condulet receptacles, V. V. receptacles, Unilets, Taplets and aluminum sockets, when so specified.

Listed as standard by Underwriters.

Cat. No.	Per Dozen	For Mazda C Lamps Watts	Cat. No.	Per Dozen	For Mazda C Lamps Watts
*1425	$6.00	50–60	*2444	$10.00	200
*1426	6.30	100	†2446A	10.00	200
†1427A	6.00	50–60	†2446B	10.00	200
†1427B	6.00	50–60	*2447	12.50	...
†1428A	6.30	100	†2447A	12.50	...
†1428B	6.30	100	2447B	12.50	...
*2443	9.00	150	.....	.....	...

*Fits brass sockets. †Fits W. P. sockets.

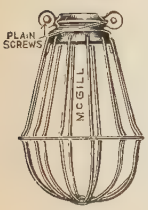
Loxon Type Reflector Guards

Same as the above, but with tinned, pressed steel half reflector.

No. 1443

Cat. No.	Per Dozen	For Mazda C Lamps Watts	Fits Socket
1400	$9.00	15–40	Brass
1401A	9.00	15–40	W.P.
1401B	9.00	15–40	W.P.
1443	9.00	50–60	Brass
1444A	9.00	50–60	W.P.
1444B	9.00	50–60	W P.

Gripon Type Lamp Guards



No. 1600

The Gripon Type Lamp Guard is fastened to the socket by means of plain screws.

Made to fit condulet receptacles, V.V. receptacles, Unilets, Taplets and aluminum sockets, when so specified.

All numbers followed by A fit any W.P. socket with the bottom bead measuring $1\frac{9}{16}$ to $1\frac{11}{16}$ inches in extreme diameter. All numbers followed by B fit any W.P. socket with the bottom bead measuring $1\frac{3}{4}$ inches in extreme diameter.

Cat. No.	Per Dozen	For Mazda C Lamps Watts	Cat. No.	Per Dozen	For Mazda C Lamps Watts
*1600	$4.00	50–60	*1608	$4.00	15–25
*1601	4.30	100	†1608A	4.30	15–25
†1602A	4.30	50–60	†1608B	4.30	15–25
†1602B	4.30	50–60	.....	....	.....

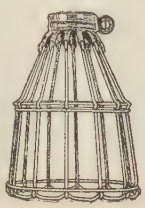
Gripon Type Reflector Guards

*1620	$7.00	50–60	*1610	$7.00	15–25
†1621A	7.00	50–60	†1611A	7.00	15–25
†1621B	7.00	50–60	1611B	7.00	15–25

*Fits brass sockets. †Fits W.P. sockets.

Protector O Lamp Guards

An open bottom guard enabling quick and easy removal or insertion of lamp and fully protects against breakage. Heavily tinned.



Cat. No.	1429	1430
Per Dozen	$4.00	4.00
Mazda C Lamps.....watts	25–60	25–60
Fits Socket	Brass	W.P.

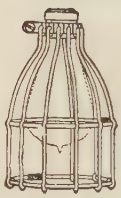
Morse High Efficiency Lamp Guards

No.	Each	Watts	Ga. Wire
For Brass Sockets			
200	....	75–100	14
204	....	200	14
For Mogul Brass Sockets			
206	....	300	12
208	....	500	12
211	....	1000	12
For Weatherproof Sockets			
200WP	....	75–100	..
204WP	....	200	..
For Mogul Weatherproof Sockets			
206WP	....	300	..
208WP	....	500	..
211WP	....	1000	..

Morse High Efficiency Locked Lamp Guards

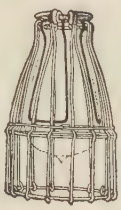
No.	Each	Watts	Ga. Wire
For Brass Sockets			
350	....	40–60	14
353	....	75–100	14
354	....	200	14
356	....	250	14
For Mogul Brass Sockets			
357	....	300	13
359	....	500	13
361	....	1000	13
For Weatherproof Sockets			
350WP	....	40–60	..
353WP	....	75–100	..
354WP	....	200	..
356WP	....	250	..
For Mogul Weatherproof Sockets			
357WP	....	300	..
359WP	....	500	..
361WP	....	1000	..

Morse Open Bottom Lamp Guards



For Brass Sockets No.	For W.P. Sockets No.	Each	Watts	Ga. Wire
1A	5A	...	25	15
1	5	...	40–60	15
3A	7A	...	25	12
3	7	...	40–60	12

Morse Open Bottom Lamp Guards



With Cushion Ring

No.	Each	Watts	Ga. Wire
For Brass Sockets			
161	...	40–60	15
162	...	75–100	15
163	...	40–60	12
164	...	75–100	12
For Weatherproof Sockets			
165	...	40–60	15
166	...	75–100	15
167	...	40–60	12
168	...	75–100	12

Morse Never-Break Lamp Guards

No.	Each	Watts	Gauge Wire
107	...	40–50	18
109	...	60–75	18
111	...	40–50	16
113	...	60–75	16

Morse No Steal Guards

For Brass Sockets

No.	Each	Watts	Ga. Wire
240	...	40	16
242	...	60	14
248	...	25	16
For Weatherproof Sockets			
244	...	40	16
246	...	60	14
249	...	25	16

Morse Tubular Guards

Tubular

Brass or Weatherproof Sockets

Cat. No.	Each	Size In.
99	....	6½x1½
99-WP	....	6½x1½
99-A	....	6½x2
99-AWP	....	6½x2
Bunghole Guards		
100	....	6½x1½

Bunghole

Crescent Wall Guards

No. 1436A

Style A fits any standard 3-inch outlet box.

Style A1 is same style as A but fits 4-inch outlet box.

Style B has removable ring which is attached to wall for 25 and 40-watt lamps only.

Style C wall guard and outlet box cover combined, No. 1439. Made of bessemer steel wire ribs, stamped rings and plate over cover which will fit a 3-inch or 4-inch outlet box and will take standard outlet box cover receptacles.

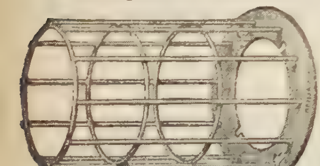
Style D is the same as Style C except that it is fitted with a trap or cover which is equipped with a key locking arrangement. Tinned finish.

Style E wall guard No. 1580 is made for use with Types J and K condulets. Heavy tinned finish.

Style F No. 1581, same as No. 1580 except furnished with locking attachment.

Cat. No.	Each	Style	Dimens., In. Diam.	Depth	Wt., Lbs. per Doz.
1436	$1.20	A	2 13/16	5¾	9
1438	1.40	A1	3⅛	6½	9
1437	1.80	B	3⅛	6½	9
1439	1.40	C	3⅛	5⅝	12
1440	2.20	D	3⅛	5⅝	13
1580	1.40	E	3⅛	6	9
1581	1.80	F	3⅛	6	10
1590	2.50	100-150 Watt	3½	6⅞	10
1591	3.00	200 Watt	4⅛	8¼	12

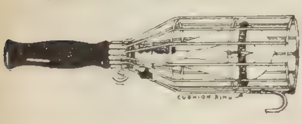
Benjamin Outlet Box Lamp Guards

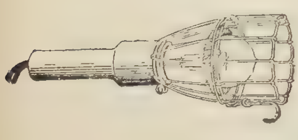


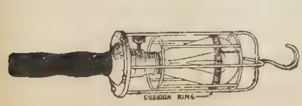
Adapted for low ceilings, side walls, foot lights, etc. Base is slotted to fit 3¼ or 4-inch boxes; will take 40 and 60-watt lamps. Heavily tinned after parts are welded.

Cat. No.	Diam In.	Depth In.	Std. Pkg.	Wt., Lbs. Each	Price Each
1400	4	5¾	10	½	$.90

Morse Eureka Portable Hand Guards



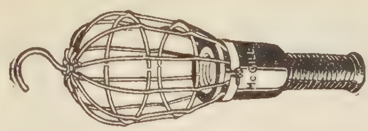




Open Bottom

No.	Each	Watts	Ga. Wire
30	....	25–40	12
70	....	50–60	12
72	....	100	12
69	....	200	12
With Reflectors			
31	....	25–40	12
74	....	50–60	12
With Cushion			
75	....	50–60	12
77	....	100	12
73	....	200	12
Closed Bottom			
36	....	25–40	8
46	....	50–60	8
48	....	100	8
With Reflectors			
37	....	25–40	8
47	....	50–60	8

No. 7000 Series McGill Rubber Handle Portable Guards



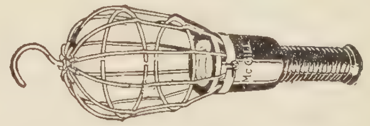
Black handle of the best grade rubber compound. Easy to grip.

The cage has 10 wires electrically welded, double plated and lacquered. Takes up to 100-watt type C lamp.

No. **7000**, No. 4003-S Black Composition Keyless Socket........each **$2.50**
No. **7000**-R, Same as No. 7000 but with Aluminum Reflector........each **3.00**
No. **7000**-S, Same as No. 7000 except with No. 4005-S 660-Watt Levolier Socket with Fibre Lever...each **3.00**
No. **7000**-SR, Same as No. 7000-R Except with No. 4005-S 660-Watt Levolier Socket with Fibre Lever........each **3.50**

No. 7000-M Series McGill Portable Lamp Guards

Mill Type



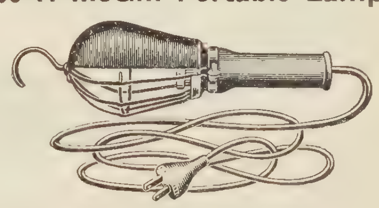
For hard usage in garages and industrials.

Has small cage for mill type lamps, 50-watt rough service lamp and 40-watt Mazda Type C lamp.

No. **7000**-M, Keyless Socket........each **$2.80**
No. **7000**-MR, Keyless Socket and Reflector.....each **3.20**
No. **7000**-MS, Lever Socket........each **3.30**
No. **7000**-MSR, Lever Socket and Reflector.....each **3.70**

Nos. 7000-M and 7000-MR can be supplied with grounding attachment at an extra cost of 50 cents each.

No. 9000-R McGill Portable Lamp Guards



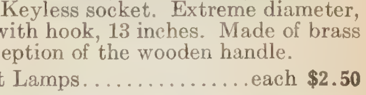
Steel wire cage is fitted with stationary hook and is adjustable to accommodate lamps from 25 to 60 watts. Has stamped steel reflector; easy-grip black rubber handle equipped with strain relief. Equipped with 20-foot rubber cord, No. 18 wire and rubber attachment plug.

Socket, 660 watts, 250 volts; porcelain base.

Tinned finish.

No. **9000**-R........each **$2.70**

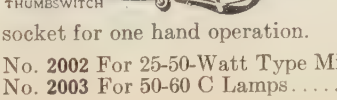
Crescent Tubular Lamp Guards


TUBULAR

A slender portable for use behind switchboard, examining boilers, among machine parts, for garages, automobiles, and places where space is limited. Keyless socket. Extreme diameter, only 2 inches. Length, with hook, 13 inches. Made of brass throughout with the exception of the wooden handle.

No. **2598**, to Fit 25-Watt Lamps........each **$2.50**

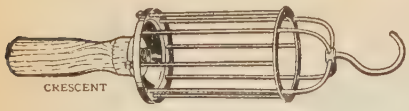
Thumb Switch Type Portable Lamp Guards


THUMBSWITCH

One of the best all around guards for the private and public garage, basements, etc. It has a non-breakable lever socket for one hand operation.

No. **2002** For 25-50-Watt Type Mill Lamps......each **$2.80**
No. **2003** For 50-60 C Lamps........each **2.80**

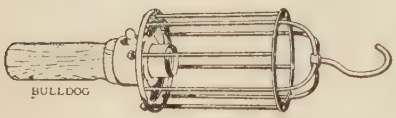
Crescent Portable Lamp Guards



Bessemer steel rods; stamped metal ring, copper-plated. Takes ⅜-inch standard brass socket.

For Mazda C lamps.
No. **4645**, for 25–60 Watt.....each **$2.50**
No. **4676**, for 25–100 Watt.....each **2.50**

Bulldog Portable Lamp Guards

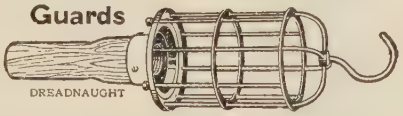


Furnished with key or keyless socket, securely embedded in handle, giving a firm, rigid base.

No. **4675**, Lever Socket to Fit 60-Watt Lamps.....each **$3.50**

No. **2590**, Keyless Socket to Fit 60-Watt Lamps...each **3.50**

No. 4000 Dreadnaught Portable Lamp Guards

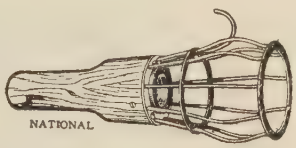


Steel wire guard with hook, copper plated. For 50-watt old style or 25-40-50-60-watt new style Mazda B or C lamps. Composition keyless socket, hardwood handle. Length 9¾ inches.
No. **4000**, Weight 1 5/16 Pounds.....each **$3.50**

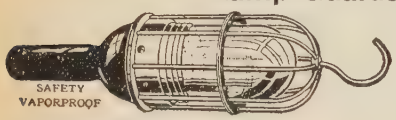
National Portable Lamp Guards

Steel, heavily tinned; composition keyless socket. 1450, milltype; 1450R, reflector.

Cat. No.	Each	Lamp Watts	Wt. Lbs.
1450	**$2.00**	15– 40	1¼
1450R	**2.25**	15– 40	1½
1451	**2.50**	25– 60	1 1/16
1452	**2.50**	40–100	1 1/16



No. 3001 Safety Vapor-Proof Portable Lamp Guards



For use wherever inflammable materials are used. Steel frame, vapor-proof receptacle. Heavily tinned.

No. **3001**, to Fit 25-Watt Lamps.....each **$5.00**
Will take 50-watt A-19 rough service lamp.

Cable Rack Portable Lamp Guards

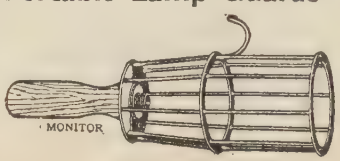
Key or keyless socket embedded in the handle. Take 50-watt old style Mazda lamps; new style, 15-60 watts...

No. **2000R**, with Key Socket.....each **$2.80**
No. **2001R**, with Keyless Socket.....each **2.80**

No. 1453 Monitor Portable Lamp Guards

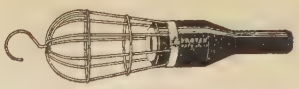
A low priced guard furnished without socket.

Prevents breakage and helps to reduce danger from hot and broken lamps.



No. **1453**, to Fit 40-Watt Lamps.....each **$1.70**

Protex Rubber-Handled Portable Lamps

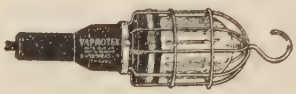


Protex Portable Lamps can be used with perfect safety. The handle is of rubber which will withstand well over 10000 volts. Rustproof guard is built for rough service. Rubber socket has lip which fits over butt of lamp to prevent water, etc. from entering.

Can be furnished with either open or closed end guard for all sizes of lamps up to and including 200 watts.

No. P, Protex Handle Only.....each **$1.25**
No. PGH, Protex Handle, Socket and Wire Guard with Hook.....each **2.50**
No. PGHR, Protex Handle, Guard, Hook and Reflector.....each **3.25**

No. VGH Vaprotex Rubber-Handled Portable Lamps



A vapor-proof, shock-proof lamp for temporary lighting in hazardous locations.

For all sizes of lamps up to and including 100 watts; steel wire or aluminum guard.

No. VGH, 60-Watt Size, with Socket, Vapor-Proof Globe, Steel Wire Guard, Hook, Less Lamp...each **$9.00**

R & S Non-Watertight Hand Portables

Extra strong, galvanized steel, with hardwood handle and No. 180 weatherproof keyless socket.

No. **473**, 60-Watt.....each **$4.80**

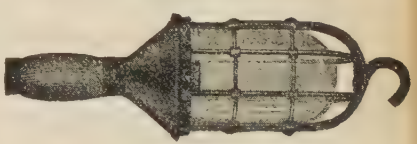
No. 422 R & S Watertight Hand Portables

Cast brass body, flat brass wire guard, hardwood handle with stuffing gland for cable and screw type globe No. 806.

Price, No. **422**, 60-Watt.....each **$5.25**

No. 519 R & S Watertight Hand Portables

All cast brass body, round wire guard with cast brass rings, hardwood handle, stuffing gland for cable and screw type globe No. 806.



No. **519**, 60-Watt.....each **$7.20**

No. 445 R & S Bunghole Lamps

Made entirely of brass and fitted with special 16 c.p. waterproof lamp and stuffing gland for cable.

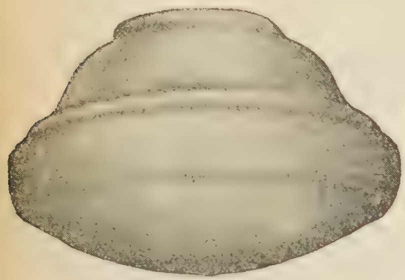
Price No. **445**, with Special Lamp.....each **$12.60**
" " **391**, Ex. Lamp, 110 Volt..... " **1.60**

Graybar Direct Lighting Globes

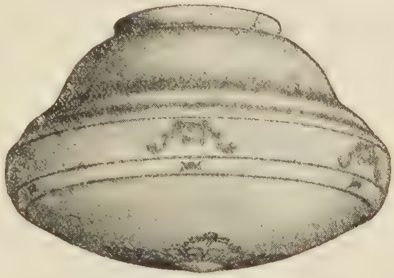
These globes are shaped to give the maximum results which can be obtained with modern diffusing glass. They have a high efficiency, being low in brightness and without shadows or bright spots. They are of uniform quality and weight. The bowls are free of streaks, blisters, checks or other imperfections. Due to the smooth surface of opal glass, dust and dirt do not settle upon them.

The Graybar No. 66, No. 88, and No. 99 series of globes are made in the standard sizes to accommodate various size lamps generally used in commercial lighting. They are interchangeable with the many styles and types of Graybar fixtures, all of which insure the correct lighting center to produce the best distribution.

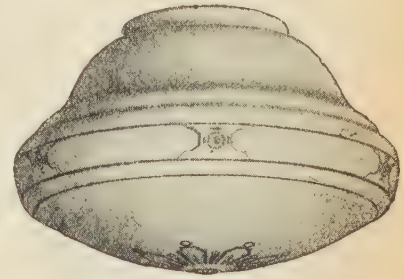
They are available in either homogeneous opal diffusing or in the popular cased glass which consists of a layer of crystal glass over opal.



No. 6620, Plain



No. 6620, D-3



No. 6620, D-4

No. 66 Series, Opal

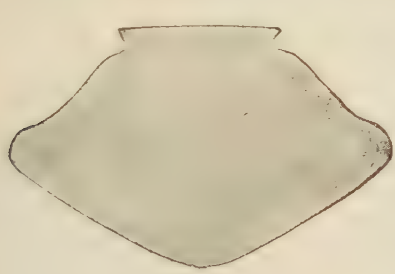
Cat. No.	*Each	Fitter In.	Diam. In.	Depth In.	Recommended Wattage	Std. Pkg.	Pkg. Wt. Lbs.
6675	$1.00	4	9	5	75	12	25
6680	1.60	4	10	6	75–100	8	25
6610	2.70	†4 or 6	12	7	100–150	6	25
6620	3.50	6	14	8½	200	2	13
6630	5.10	6	16	9¼	200–300	1	10
6650	7.90	8	18	11	500	1	15

For decorative bowls, specify D-3 or D-4 after Cat. No.

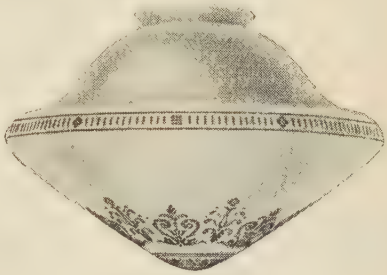
No. 66 Series, Cased

Cat. No.	*Each	Fitter In.	Diam. In.	Depth In.	Recommended Wattage	Std. Pkg.	Pkg. Wt. Lbs.
6675	$1.20	4	9	5	75	12	25
6680	1.90	4	10	6	75–100	8	25
6610	3.20	†4 or 6	12	7	100–150	6	25
6620	4.10	6	14	8½	200	2	13
6630	6.10	6	16	9¼	200–300	1	10
6650	10.10	8	18	11	500	1	15

For decorative bowls, specify D-3 or D-4 after Cat. No.



No. 8820, Plain



No. 8820, D-452

No. 88 Series, Opal

With Ground Off Necks—For G Type Fixture Only

8875½	$1.00	4	9	5 14/16	75	8	18
8880½	1.60	4	10	6	75–100	8	19
8810½	2.70	†4 or 6	12	7 11/16	100–150	4	17
8820½	3.50	6	14	8 5/16	200	2	13
8830½	5.10	6	16	9 10/16	200–300	2	15

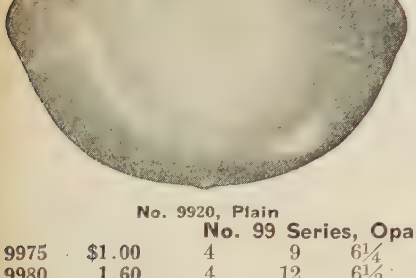
For decorative bowls, specify D-452 after Cat. No.

No. 88 Series, Opal

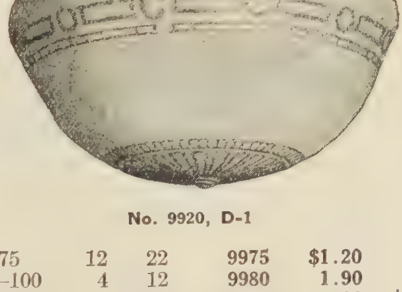
With Necks—For All Standard Fixtures

8875	$1.00	4	9	6 8/16	75	8	19
8880	1.60	4	10	6 8/16	75–100	8	20
8810	2.70	†4 or 6	12	8 6/16	100–150	4	18
8820	3.50	6	14	8 14/16	200	2	14
8830	5.10	6	16	10 6/16	200–300	2	16

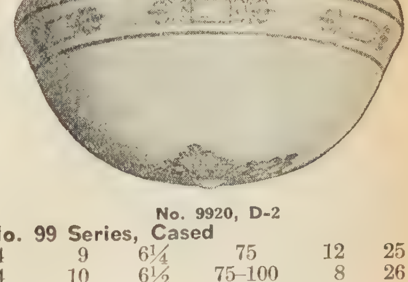
For decorative bowls, specify D-452 after Cat. No.



No. 9920, Plain



No. 9920, D-1



No. 9920, D-2

No. 99 Series, Opal

9975	$1.00	4	9	6¼	75	12	22
9980	1.60	4	12	6½	75–100	4	12
9910	2.70	†4 or 6	12	7¾	100–150	4	14
9920	3.50	6	14	9	200	2	12
9930	5.10	6	16	10	200–300	2	16
9950	7.90	‡6 or 8	18	12	500	1	15
9960	14.10	8	20	14	500–750	1	17

For decorative bowls, add D-1, D-2, or D-6 to Cat. No.

No. 99 Series, Cased

9975	$1.20	4	9	6¼	75	12	25
9980	1.90	4	10	6½	75–100	8	26
9910	3.20	†4 or 6	12	7¾	100–150	6	25
9920	4.10	6	14	9	200	2	13
9930	6.10	6	16	10	200–300	1	10
9950	10.10	‡6 or 8	18	12	500	1	15
9960	17.00	8	20	14	500–750	1	17

For decorative bowls, add D-1, D-2, or D-6 to Cat. No.

*Prices on decorative bowls upon application. †The 4-inch fitter is standard; 6-inch supplied on request only. ‡Specify either 6 or 8-inch when ordering.

Graybar Semi-Indirect and Indirect Lighting Globes

Where semi-indirect or indirect lighting is desired, Graybar has a variety of glassware to offer. Most of these types follow the style of the enclosed semi-indirect lighting globe.

This type of globe is available in three distinct shapes.

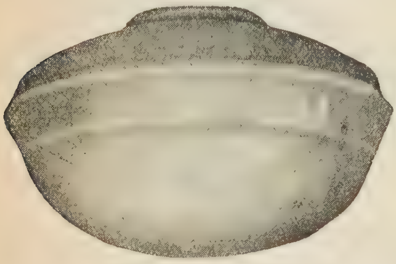
The No. 44 series represents a development which makes it adaptable to fixtures already installed and where a totally indirect system is desired to replace a direct or semi-indirect system. The Silvray Lamp (silver processed bottom) is used with the unit.

This globe is constructed in either of two ways. It may consist of a single layer of opal glass of high translucent character or it may be made of crystal glass, heavily enameled on the bottom with a slightly diffused top.

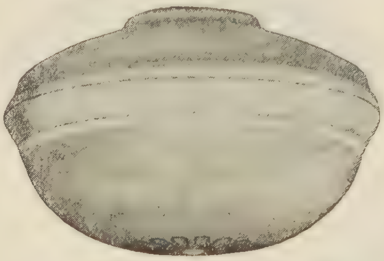
The No. 33 series of enclosed semi-indirect lighting globes is made of clear crystal glass with the lower half treated with a silicate enamel and the upper half slightly etched on the inside for better diffusion.

The No. 333 series shape is constructed with the lower part consisting of three layers of glass—opal, crystal, and opal, while the upper part consists of a thin layer of opal under the crystal. The No. 77 series is similarly constructed.

The No. 16 is an open type semi-indirect bowl of opal glass adaptable to the 11-R suspension fixture.



No. 3320, Plain

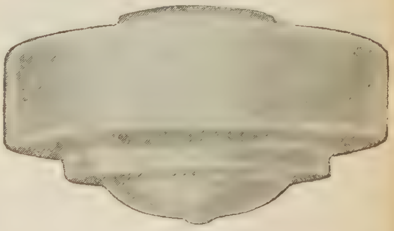


No. 3320, D-5

No. 33 Series, Reflex

Cat. No.	*Each	Fitter In.	Diam. In.	Depth In.	Recommended Wattage	Std. Pkg.	Pkg. Wt. Lbs.
3375	**$2.50**	4	9	6¼	75	12	22
3380	**2.90**	4	10	6½	75–100	4	12
3310	**3.80**	4 or 6	12	7¾	100–150	4	14
3320	**5.90**	6	14	9	200	2	12
3330	**7.40**	6	16	10	200–300	2	16
3350	**10.60**	6 or 8	18	12	500	1	15

For decorative bowls, specify D-5 after Cat. No.

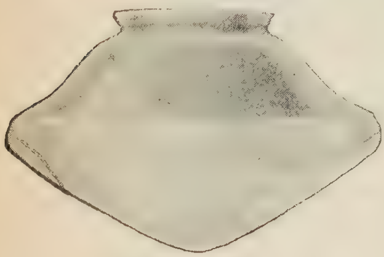


No. 333-20, Plain

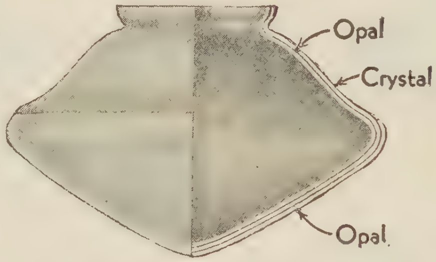
No. 333 Series, Reflex

Cat. No.	*Each	Fitter In.	Diam. In.	Depth In.	Recommended Wattage	Std. Pkg.	Pkg. Wt. Lbs.
333–10	**$4.30**	6	12	7¾	100–150	6	27
333–20	**6.50**	6	14	9	200	2	15
333–30	**8.30**	6	16	10	200–300	1	11
333–50	**11.70**	8	18	12	500	1	16

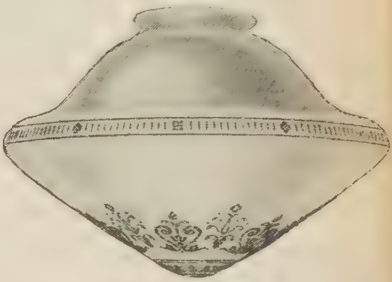
For decorative bowls, specify D-401 after Cat. No.



No. 7720, Plain



No. 7720, Plain, Cross Section



No. 7720, D-452

No. 77 Series, Reflex

With Ground Off Necks—For G Type Fixtures Only

7775½	**$2.80**	4	9	$5\frac{14}{16}$	75	8	18
7780½	**3.20**	4	10	6	75–100	8	19
7710½	**4.30**	†4 or 6	12	$7\frac{11}{16}$	100–150	4	17
7720½	**6.50**	6	14	$8\frac{15}{16}$	200	2	13
7730½	**8.30**	6	16	$9\frac{10}{16}$	200–300	2	15

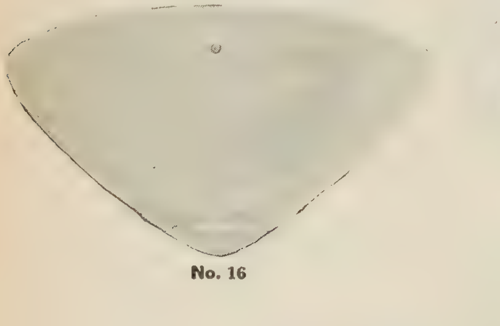
For decorative bowls, specify D-452 after Cat. No.

No. 77 Series, Reflex

With Necks—For All Standard Fixtures

7775	**$2.80**	4	9	$6\frac{8}{16}$	75	8	19
7780	**3.20**	4	10	$6\frac{8}{16}$	75–100	8	20
7710	**4.30**	†4 or 6	12	$8\frac{6}{16}$	100–150	4	18
7720	**6.50**	6	14	$8\frac{14}{16}$	200	2	14
7730	**8.30**	6	16	$10\frac{6}{16}$	200–300	2	16

For decorative bowls, specify D-452 after Cat. No.

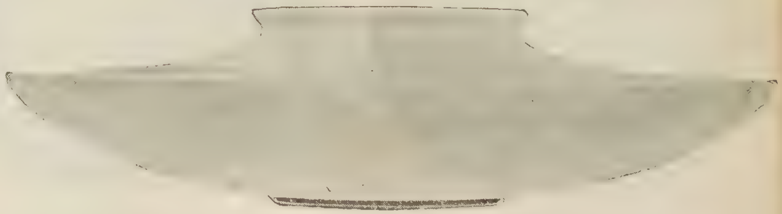


No. 16

No. 16, Open Bowls

For 11R Fixture

16	**$6.10**		16	7⅛	200	4	27



No. 4420, Plain

No. 44 Series, Reflex

With Ground Off Neck—For G Type Fixture Only

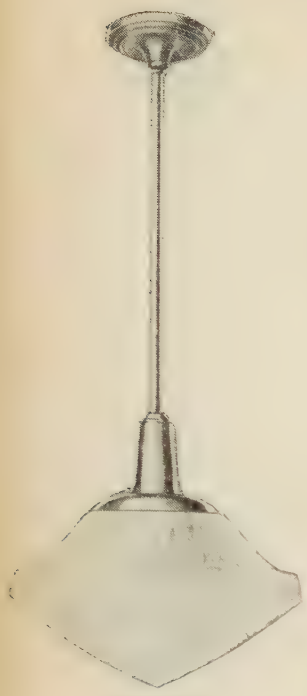
4410½	**$3.80**	4	12	2	150	6	12
4420½	**5.90**	6	14	2½	200	6	16
4430½	**7.40**	6	16	3½	300	3	10

With Neck—For Standard Fixtures

4410	**$3.80**	4	12	2½	150	6	12
4420	**5.90**	6	14	3	200	6	16
4430	**7.40**	6	16	4	300	3	10

*Prices are for plain globes only. Prices for decorative bowls upon application.
†4-inch is standard, 6-inch furnished on request only.

Graybar G-Type Fixtures



G6H-7720½

The G-Type Fixture was designed for use with the No. 77 or No. 88 series of globes. As the necks on the globes are unnecessary with this fixture, they have been removed.

This combination of globe and fixture offers a highly efficient and pleasing unit. Graceful lines have been attained without hampering the sturdiness of construction.

The G Fixture is made in both the tube suspension and ceiling types. It is constructed of 22-gauge brass and furnished with 4 or 6-inch safety type fitters suitable to suspend all the globes of the No. 77 and 88 series. These globes range from 9 to 16 inches in diameter in the direct and semi-indirect type enclosing globe to accommodate up to 500-watt lamps.

G6C-8820½

The holder proper consists of three L-shaped lugs attached to the lower flange of the socket cover. They easily slip under the neck opening of the globe and form a neat support without strain of any kind for the globe. Once seated, the globe is locked in place by two locking slides which can be operated simultaneously with one hand by merely sliding them in or out of position. The whole mechanism of this holder is concealed by an accurate fitting, removable cover.

Wired complete with strap, screws, and knurled nuts, ready for installation.

Finish is satin chromium.

Cat. No.	Each	Suspension	Fitter In.	Length Fixture Less Glass In.	Socket	Std. Pkg.	Pkg. Wt. Lbs.
G4C	$2.40	Ceiling	4	5⅛	Medium	10	17
G6C	2.40	Ceiling	6	6⅛	Medium	10	17
G7C	3.00	Ceiling	6	6⅛	Mogul	10	20
G4H	4.00	Stem	4	26	Medium	10	20
G6H	4.00	Stem	6	26	Medium	10	20
G7H	4.60	Stem	6	26	Mogul	10	25

Graybar X-Type Fixtures

X6C-3320

X6H4-3320

Since the introduction of the Graybar X-Type Fixtures, the purchase of inferior fixtures for economy has become unnecessary. The low price of this fixture has been obtained, without the sacrifice of workmanship or material, by quantity production and improved manufacturing.

Plated statuary bronze is the standard finish. When required, finishes such as English bronze, satin chromium or bronze metal can be furnished.

Made to accommodate all lamps up to and including 300 watts, and are wired complete with strap, screws, and knurled nuts, ready for installation.

Cat. No.	*Each	Suspension	Fitter In.	Length Fixture Only In.	Socket	Std. Pkg.	Pkg. Wt. Lbs.
X4C	$1.70	Ceiling	4	4	Medium	25	30
X6C	1.80	Ceiling	6	6	Medium	25	30
X7C	2.70	Ceiling	6	6	Mogul	25	40
X4H	2.50	Chain	4	36	Medium	24	53
X6H	2.50	Chain	6	36	Medium	24	55
X7H	2.90	Chain	6	36	Mogul	24	61
X4H4	3.30	Stem	4	26	Medium	Bulk	..
X6H4	3.30	Stem	6	26	Medium	Bulk	..
X7H4	3.70	Stem	6	26	Mogul	Bulk	..

*Prices are for 22-gauge brass.

Fixtures supplied with socket and switch for 2 filament lamp, add $2.40.

X6H-9920

Graybar A-Type Fixtures

A6H4-3320

A6C-9920

A6H-333-20

The Graybar A-Type fixture offers a pleasing design with lasting finishes and fine workmanship.

To install glassware, merely slip the glass over the two arms on holder and lower self-aligning ring which makes the unit foolproof and dustproof.

Accommodates lamps up to and including 300 watts.

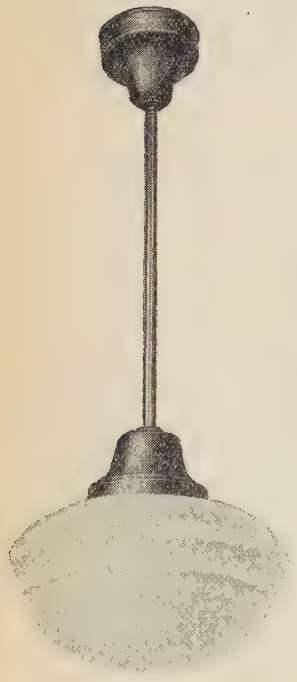
Standard finishes are statuary bronze or pewter. For brass fixtures, statuary bronze, pewter, acid bronze, brush brass or bronze metal finish is supplied.

All fixtures are wired complete with strap, screws, and knurled nuts, ready for installation.

Cat. No.	*Each	Suspension	Holder In.	Socket	Length Fixture Only In.	Std. Pkg.	Pkg. Wt. Lbs.
A4C	$1.10	Ceiling	4	Medium	4½	32	..
A6C	1.10	Ceiling	6	Medium	4¾	16	..
A7C	2.30	Ceiling	6	Mogul	5½	16	..
A4H	1.90	Chain	4	Medium	36	32	..
A6H	1.90	Chain	6	Medium	36	32	..
A7H	2.60	Chain	6	Mogul	36	32	..
A4H4	4.30	Stem	4	Medium	24	Bulk	..
A6H4	4.30	Stem	6	Medium	24	Bulk	..
A7H4	4.80	Stem	6	Medium	24	Bulk	..

*Prices are for fixtures made of steel. Prices on 20, 22, and 24-gauge brass upon application.

Graybar W-Type Fixtures



W6H4-3320

W6C-9920

W6H-333-20

Graybar W-Types feature both good construction and substantial materials. Supplied in eggshell bronze finish but can be had in special finishes.

Accommodates all sizes of commercial lamps.

Wired complete with strap, screws, and knurled nuts, ready for installation.

Cat. No.	Each	Suspension	Fitter In.	Length Fixture Only In.	Socket	Std. Pkg.	Pkg. Wt. Lbs.
W4C	$2.00	Ceiling	4	4¾	Medium	12	22
W6C	2.10	Ceiling	6	5½	Medium	12	28
W7C	2.40	Ceiling	6	5½	Mogul	12	30
W4H	2.90	Chain	4	24	Medium	12	29
W6H	3.20	Chain	6	24	Medium	12	32
W7H	3.45	Chain	6	24	Mogul	12	34
W4H4	3.30	Stem	4	24	Medium	10	30
W6H4	3.50	Stem	6	24	Medium	10	34
W7H4	3.85	Stem	6	24	Mogul	10	36
W8H4	5.50	Stem	8	24	Mogul	10	38

Graybar Shelcrest Fixtures

M6H-3320

M6C-9920, D-2

Graybar Shelcrests are a distinct advance in design, material and appearance from competitive commercial fixtures now available. They have many unique features—simple foolproof holder, sectional stem, swivel joint, shallow slip canopy, and maximum insulating qualities.

Shelcrest fixtures are supplied wired with No. 14 stranded asbestos-covered wire, marked for polarity. They are furnished in hanging and ceiling types, accommodating all lamps up to and including 300 watts. When used with Graybar No. 99, 66, 33, or 88 series, plain or decorated globes, Shelcrests are suitable for the finest of commercial interiors.

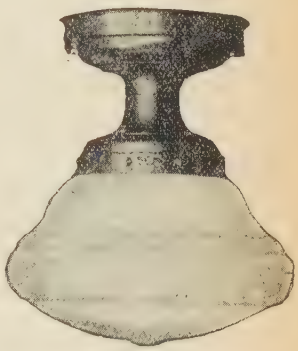
Made of genuine molded bakelite.

The standard finish of Shelcrest fixtures is Japanese Bronze. The color permeates the entire material and surface scratches, common to fixtures with any other finish, will not show on Shelcrests. The finish will not tarnish or fade.

Cat. No.	Each	Suspension	Fitter In.	Length Fixture Only In.	Socket	Std. Pkg.	Pkg. Wt. Lbs.
M4C	$4.80	Ceiling	4	4½	Medium	12	21
M6C	6.40	Ceiling	6	5	Medium	12	24
M4H	6.40	Stem	4	23	Medium	12	24
M6H	7.40	Stem	6	24	Medium	12	27
M7H	9.20	Stem	6	24	Mogul	12	30

Graybar Lincrest Fixtures

L6H-9920



L6C-6620

Lincrest Fixtures have screwless holder made of three metal segments actuated by single operating pin, protruding through a safety slot. One easy movement contracts segments on camera shutter principle—automatically centers the globe without strain on glass and locks in position.

Canopy is of No. 22 A. W. G. brass. Has rolled edges, knockout, and solid brass slip collar securely fastened. Two set screws are in slip collar.

Suspension type has a cast brass hickey, ½ and ¾-inch female thread; stem, ¾-inch heavy brass tubing over iron nipple. Cast brass loops, brass chain, porcelain socket rigidly mounted in correct position. Smooth roomy wire channels. Overall length of suspension fixtures, 26 inches.

Supplied with No. 16 asbestos-covered stranded wire (unattached) with tracer in art silk braid.

Finished in heavy plated statuary bronze, buffed to a high polish and uniform color.

Cat. No.	Each	Suspension	Fitter In.	Length Fixture Only In.	Socket	Std. Pkg.	Pkg. Wt. Lbs.
L4C	$3.40	Ceiling	4	5⅛	Medium	12	29
L6C	4.40	Ceiling	6	6⅛	Medium	12	44
L7C	5.10	Ceiling	6	6⅛	Mogul	12	45
L4H	4.10	Chain	4	26	Medium	12	39
L6H	4.90	Chain	6	26	Medium	12	45
L7H	5.60	Chain	6	26	Mogul	12	48

S6H-9920

Graybar Stancrest Fixtures

S6C-9920

Stancrest Fixtures have a screw type globe holder with 8/32-inch brass screws threaded through heavy brass lugs. Screws are beveled to prevent loosening and upset to prevent removal. Four screws are provided for 6-inch fitters and three screws for the 4-inch fitters. Ceiling type is supplied with slotted strap and screws to take slotted barrel nuts.

Canopy is of No. 22 A.W.G. brass, with rolled edges and knockout. Solid brass slip collar, cast brass hickey. Stem is ¾-inch heavy brass tubing over iron nipple. Cast brass loops, brass chain, porcelain socket, and smooth roomy wire channel.

Supplied with No. 16 asbestos covered stranded wire (unattached) with tracer in art silk braid.

Finished in heavy plated statuary bronze, buffed to a high polish and uniform color.

Cat No.	Each	Suspension	Fitter In.	Length Fixture Only In.	Socket	Std. Pkg.	Pkg. Wt. Lbs.
S4C	$2.30	Ceiling	4	5	Medium	12	28
S6C	3.00	Ceiling	6	5½	Medium	12	39
S7C	3.70	Ceiling	6	5½	Mogul	12	41
S4H	3.00	Chain	4	26	Medium	12	33
S6H	3.40	Chain	6	26	Medium	12	36
S7H	4.10	Chain	6	26	Mogul	12	39

F6H-6620

Graybar Faircrest Fixtures

F6C-6620

Faircrest Fixtures have screw type holder consisting of 8/32-inch brass screws threaded through heavy brass lugs securely held in place. Lugs have five threads. Screws are bevel-pointed to prevent loosening and upset to prevent removal. Four screws are supplied in 6-inch holder and three screws on the 4-inch holder.

Ceiling types are supplied with slotted barrel nuts for mounting.

Canopy and socket covers are No. 22 A.W.G. brass with rolled edges. Knockout in canopy flange. Brass chain and loops.

Supplied with No. 16 asbestos-covered stranded wire, tracer in art silk braid.

Finished in plated statuary bronze on eggshell surface.

Cat. No.	Each	Suspension	Fitter In.	Length Fixture Only In.	Socket	Std. Pkg.	Pkg. Wt. Lbs.
F4C	$1.90	Ceiling	4	5	Medium	12	28
F6C	2.60	Ceiling	6	5½	Medium	12	39
F7C	3.30	Ceiling	6	5½	Mogul	12	41
F4H	2.60	Chain	4	26	Medium	12	33
F6H	3.00	Chain	6	26	Medium	12	36
F7H	3.70	Chain	6	26	Mogul	12	39

Graybar R-Type Fixtures

No. 11R16

The R-Type Fixture was designed to offer a pendant which permitted a choice of various reflecting mediums.

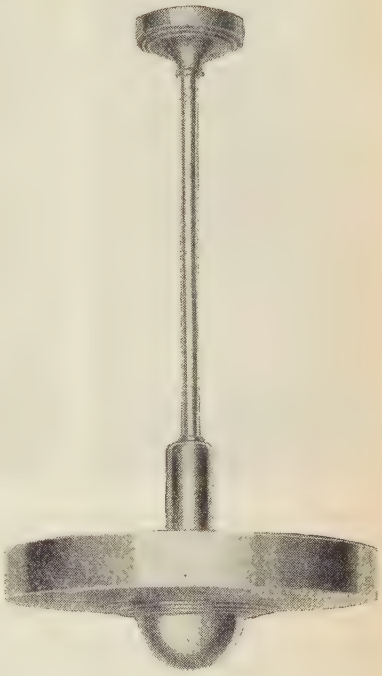
The 11R16 consists of the pendant 11R to which is attached the No. 16 opal glass bowl. This bowl is available in the 16-inch diameter only.

The 11R116 consists of the pendant 11R to which is attached the No. 116 porcelain enameled steel reflector. The inside of this reflector is coated with the best grade reflecting white enamel. The outside is finished in a rich cream color porcelain enamel. The combination presents a totally indirect fixture which is not unlike the appearance of the 11R16 when unlighted.

The 11R17 consists of the 11R pendant to which is attached a specially designed, shallow 20-gauge spun metal pan. The outside is finished in the same satin chromium finish as the pendant itself. A cup reflector designed to properly control the light is also supplied.

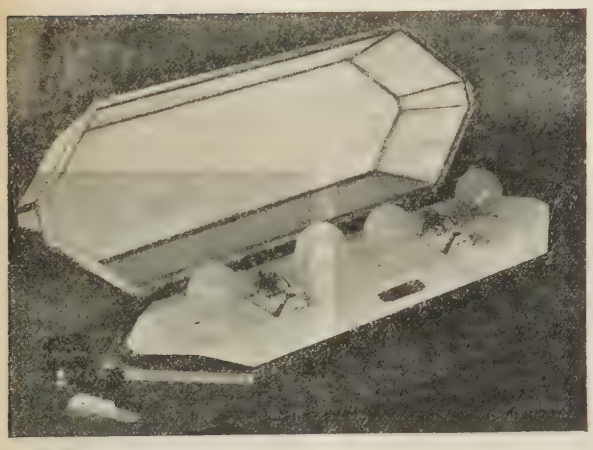
The 11R pendant as supplied with this fixture will be shipped with ¾-inch stem unless ½-inch stem is specifically ordered.

Cat. No.	Hanger Each	Length In.	Reflector Diam. In.	Lamp Watts
11R	$3.30	26	..	...
11R16	9.40	33	16	200
11R116	7.00	33	16	200
11R17	10.60	31	16	200
11RM18	11.10	31	16	300



No. 11R17
No. 11RM18

Graybar Domino System of Decorative Lighting



The Domino unit consists of a pointed oblong box composed of nine pieces of flashed opal glass held in a satin chromium frame, die-cast from the same metal alloy that is used in automobile hardware. A simple modernistic design.

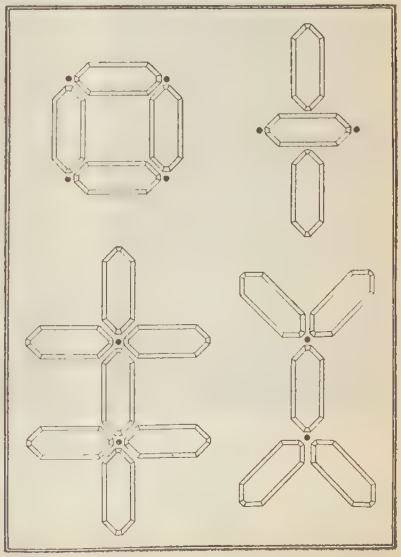
Two special twin sockets accommodate lamps of from 25 to 100-watt sizes, the light being directed downward and sideways by a baffle plate of porcelain enamel.

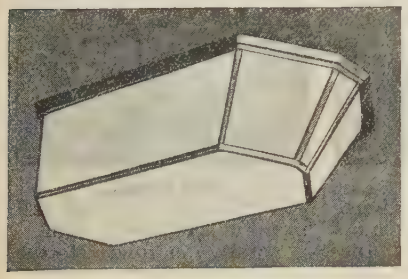
The individual units are interconnectible at ends and sides. The diagram shows four simple patterns which suggest the decorative possibilities of the Domino System.

Length, 31 inches; width, 11 inches; depth, 6¾ inches. Connector, 2⅜-inch diameter, is listed separately.

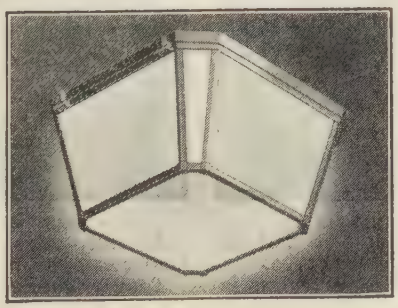
Complete instructions are included with each unit.

Domino units can also be furnished square as illustrated below.





Oblong Domino Lighting Unit



Square Domino Lighting Unit

Graybar Silvray Fixtures
Commercial Units

Puritan

An attractive metal and glass indirect unit. The luminous louvre and the softly lighted glass disc combine to provide an unusually pleasing effect.

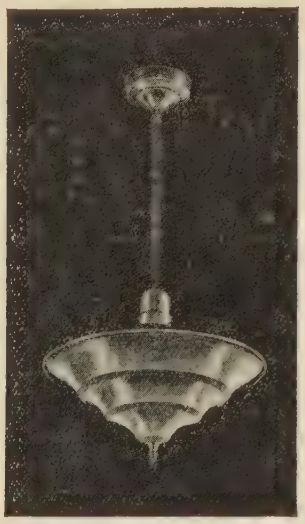
Self-aligning swivel joint concealed in canopy.

Finish, 2-tone aluminum and cadmium pewter.

Plymouth

A totally indirect luminaire of massive proportions.

Designed principally for use in large areas with relatively high ceilings, such as large retail establishments.



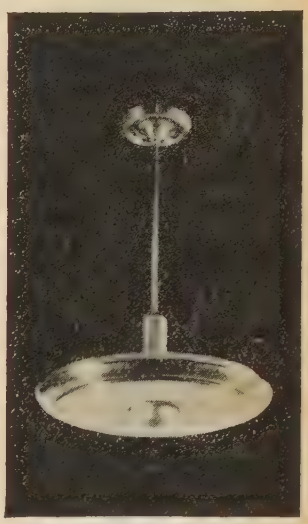
Metalux

A good appearing all-metal unit with modernistic lines. Totally indirect of the opaque bowl type.

Constructed of heavy gauge metals.

Reeded stem suspension. Self-aligning swivel joint.

Finish, cadmium pewter with black relief.



National

An indirect unit of unusual design, yet conventional.

Similar in construction and finish to the Puritan Unit.

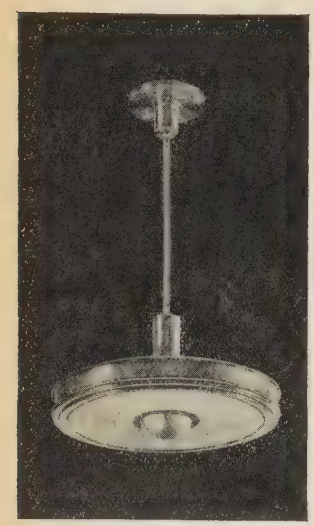
Silvray Indirect Fixtures are ruggedly constructed of suitable heavy gauge metals of selected quality. They provide many additional advantages over ordinary indirect fixtures.

The Silvray Process marks a radically different method in the design and application of indirect lighting, eliminating the need of auxiliary reflectors. The inherent high efficiency of the Silvray Processed Lamp makes possible indirect illumination on a wattage basis no higher than is required for direct or semi-indirect lighting. Unusually excellent results as to distribution, intensity, and maintained high efficiency, are obtained with cleaning practically eliminated.

These Silvray Fixtures actually take no part in the delivery of illumination, as they are equipped with the light-directing Silvray Processed Lamp. The sole function of the fixture is to provide the decorative note which the particular need may require.

Relamping is done from below. It should be remembered that after each processed lamp is replaced it restores the unit to its initial efficiency, regardless of the age of the fixture.

A safe bayonet type fitting makes the bowl instantly removable from the suspension by a simple twist—no screws or complicated assemblies.



Standish

A new departure in indirect luminaires, possessing a very small cross section.

Similar in construction and finish to the Puritan Unit.

Bilite

Totally indirect unit of the luminous bowl type.

The bowl of art glass is softly and evenly illuminated suggesting a light source.

Moderne

An all metal indirect luminaire of simple design.

Totally indirect of the opaque bowl type, possessing many attractive features.

Old Colony

A widely accepted all metal unit of good design.

Totally indirect of the opaque bowl type, possessing many attractive features.

Graybar Silvray Processed Incandescent Lamps

Indirect Covelite Spraylite

The Indirect (bowl-silvered) Process is used with Silvray Commercial Fixtures and in Silvray Industrial Reflectors. The output of this type is uniformly 97 per cent clear lamp output.

The Covelite Process may frequently be used in place of auxiliary reflectors. It has the advantage of requiring extremely little space in cove, wall niche, and similar installations. It is used to advantage in indirect fixtures containing lamps in a horizontal position. Covelites for local lighting of lathes, etc. provides high intensity on the work, and completely shields the workers' eyes.

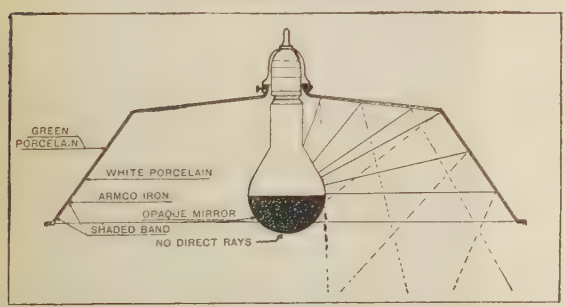
The Spraylite Process is for use in indirect floor lamps, for candelabra fixtures of ornamental indirect design, for foundries and other dirty industrials where exposed reflecting surfaces are practically useless, and for window lighting in existing reflectors.

Watts	Process Charge Each	Watts	Process Charge Each	Watts	Process Charge Each
40	$.54	100	$.59	400	$1.31
50	.54	150	.62	500	1.80
60	.54	200	.90	750	2.80
75	.57	300	1.31	1000	3.75

Prices quoted cover cost of the process only. Lamps are not included. If lamps are not furnished and are desired complete, the list price of the clear lamp must be added to the above charges.

Graybar Silvray Reflectors

Industrial Units



The standard Industrial Reflector is furnished in green porcelain enamel outside and white matte porcelain inside, with detachable husk.

Complete eye-shielding is provided by the silver skin applied to the lamp itself. The design of the special reflector assures evenly distributed and diffused light of proper intensity.

The large area of the reflector creates in effect a modified form of indirect illumination for industrial plants and for locations where ceiling conditions do not permit the use of indirect luminaires.

Cat. No.	*Each	Wattage	Diameter Inches	Std. Pkg.	Pkg. Wt. Lbs.
9	$2.20	50–75	10	10	17½
10	3.60	100–150	17	10	35
11	4.50	200	20	10	40
12	8.75	300–400–500	26	5	45
12A	9.50	750–1000	26	5	47

*Prices do not include sockets.

Graybar Silvray Commercial Fixtures

Standish

Standard package, 1.

Cat. No.	Each	Wattage	Diam. In.	*Suspension	Wt. Lbs.
101– 2	$17.50	200	16	24	11
102– 3	19.50	300	18	31	13
102– 5	19.50	500	18	31	13

Pilgrim

Standard package, 1.

110– 2	$17.50	200	16	24	10
111– 3	19.50	300	18	31	12
111– 5	19.50	500	18	31	12

Bilite

Standard package, 1.

200– 1	$16.00	100	14	24	9
200– 1½	16.00	150	14	24	9
201– 2	17.50	200	16	24	11
202– 3	19.50	300	18	31	12
202– 5	19.50	500	18	31	12
203– 7½	32.50	750	24	38	16
203–10	32.50	1000	24	38	16
203–15	32.50	1500	24	38	16

Old Colony

Standard package, 1.

210– 1½	$15.00	150	14	24	6
211– 2	16.00	200	16	24	7½
212– 3	17.50	300	18	31	9
212– 5	17.50	500	18	31	9
213– 7½	26.00	750	24	38	16
213–10	26.00	1000	24	38	16
213–15	26.00	1500	24	38	16

Puritan

Standard package, 1.

301– 2	$19.00	200	18½	24	11
302– 3	21.00	300	20½	31	13
302– 5	21.00	500	20½	31	13
303– 7½	37.50	750	29	38	18
303–10	37.50	1000	29	38	18
303–15	37.50	1500	29	38	18

Moderne

Standard package, 1.

510– 1½	$11.50	150	14	24	6
511– 2	13.00	200	16	24	7½
512– 3	14.50	300	18	31	9
512– 5	14.50	500	18	31	9
513– 7½	19.00	750	24	38	16
513–10	19.00	1000	24	38	16
513–15	19.00	1500	24	38	16

Metalux

Standard package, 1.

611– 2	$16.00	200	16	24	7½
612– 3	17.50	300	18	31	9
612– 5	17.50	500	18	31	9
613– 7½	26.00	750	24	38	16
613–10	26.00	1000	24	38	16
613–15	26.00	1500	24	38	16

National

Standard package, 1.

800– 1	$17.50	100	16½	24	9
801– 2	19.00	200	18½	24	11
802– 3	21.00	300	20½	31	13
802– 5	21.00	500	20½	31	13

Plymouth

Standard package, 1.

902– 3	$32.50	300	24	31	21
902– 5	32.50	500	24	31	21
903– 7½	47.50	750	30	38	28
903–10	47.50	1000	30	38	28
903–15	47.50	1500	30	38	28

*Stem suspensions are standard; chain suspensions optional.

Graybar Muralier Fixtures

Muralier Fixtures provide decorative painting composed specially for an architectural setting. Muralier presents a fixture which, in its luxurious blending of design and color effects marks a new epoch in this lighting age.

A refreshing change in the color scheme may be wrought by the alternate use of red, green, blue, or amber. These colors bring interior illumination in harmony with studied decorative effects.

Standard finish, oxidized aluminum.

Fixtures are completely wired and individually packed.

Chain Pendant Type

Cat. No.	Each	Diameter Deflector Inches	Recommended Size Lamp Watts	Type Socket	Length Over All Inches
8012	$12.60	12	100–150–200	Medium	36
8015	15.00	15	300	Mogul	42
8018	16.80	18	300–500	Mogul	42
8024	31.50	24	750–1000	Mogul	42
		Ball Swivel Stem Pendant Type			
8022	$14.10	12	100–150–200	Medium	36
8025	16.50	15	300	Mogul	42
8028	18.30	18	300–500	Mogul	42
8034	33.00	24	750–1000	Mogul	42
		Close Ceiling Type			
8212	$10.95	12	100–150–200	Medium	18
8215	13.95	15	300	Mogul	21½
8218	15.75	18	300–500	Mogul	24½
8224	30.45	24	750–1000	Mogul	29

Muralier Glass Color Filters

The following listing covers primary colors only. With the additional intermediate tints available it is possible to create any shade desired. Combination color filters are also offered to produce distinct color effects on each deflector, or combinations of colors and tints in limitless arrangement.

Muralier Diameter.....inches	12	15	18	24
Each	$1.26	1.59	1.59	2.64
Cat. No. Red Filter	8508	8500	8500	8504
Cat. No. Amber Filter	8509	8501	8501	8505
Cat. No. Green Filter	8510	8502	8502	8506
Cat. No. Blue Filter	8511	8503	8503	8507

Graybar Amolier Fixtures

Amolier is an all-purpose unit with the meritable features of direct, indirect, and semi-indirect lighting.

The Galax dual-density enclosing globe of homogeneous structure affords maximum upward reflection of diffused light over a wide area and supports the etched aluminum deflector which screens the light source.

The low intensity direct light through the bowl section also lights the face of the deflector with a soft luminous effect. The combination is both pleasing and efficient.

Finish, oxidized aluminum.

Ceiling Suspension

Plain Cat. No.	Plain *Each	Decorative Cat. No.	Decorative *Each	Recommended Size Lamp Watts	Maximum Diameter Deflector Inches	Type Socket	Glass Diam. Inches	Length Over All Inches
6156	$15.12	6157	$19.92	150	15	Medium	9x4	15
6206	19.02	6207	25.02	200	18	Medium	12x5	18
6306	27.24	6307	34.44	300–500	22½	Mogul	14x6	24
				Chain Pendant Suspension				
6150	$15.60	6155	$22.20	150	15	Medium	9x4	36
6200	19.50	6205	27.30	200	18	Medium	12x5	36
6300	27.72	6305	36.72	300–500	22½	Mogul	14x6	48
				Swivel Stem Pendant Suspension				
6151	$17.40	6154	$22.20	150	15	Medium	9x4	36
6201	21.30	6204	21.30	200	18	Medium	12x5	36
6301	29.52	6304	36.72	300–500	22½	Mogul	14x6	48

*Prices are for plain glass only. For decorative glass, add J-317 to Cat. Nos. plus the following list: $3.36 for 150-watt lamps, $4.50 for 200-watt lamps, and $5.85 for 300-500-watt lamps.

Graybar Miller Ultra-Violet Fixtures

The Adjustable Angle Unit and Wide Spread Unit are for use in hospital solariums, gymnasiums, basketball and squash courts, swimming pools, and other places where periodic ultra-violet exposures are desired.

Adjustable Angle Unit

Cat. No.	Each	Type Lamp	Diam. In.	Depth In.	Fitter In.
	Transformer and Holder				
1760	**$34.00**	...	7	6¾	½ Tap
	Intensive Reflector, Swivel				
1764	**$11.75**	S-1	16¼	11	3¼
	Extensive Reflector, Swivel				
1766	**$10.40**	S-1	14	9¾	3¼

Specify transformer and select one reflector for light distribution desired.

Wide Spread Unit

	Wide Spread Reflector, Plain				
1762	**$4.50**	S-1	16¼	8¼	3¼
	Transformer and Holder				
1760	**$34.00**	...	7	10¼	3¼

No. 2121

This fixture operates on two circuits. One is for direct lighting ultra-violet radiation and uses one Type S-2 Mazda Sunlight Lamp. The other circuit is for the semi-indirect lighting component and uses three 50 to 150-watt Mazda lamps.

Length, 29½ inches. Diameter, 19½ inches. Reflector for S-2 lamp, 12-inch distributing type.

Finished in dull or green and polished aluminum, or in bronze.

No. **2121**..................each **$41.35**

No. 11-A

This fixture has ball-joint so that rays can be directed to any angle. Louvres surround the lamp.

Length, 12½ inches. Diameter of concentrating type reflector, 11½ in.

Finished in ivory or bronze.

No. **11-A**..................each **$24.75**

No. 1742

This unit will find application in factories, basketball and squash courts, gymnasiums, swimming pools, bowling alleys, and similar locations.

Length, 11½ inches. Diameter of wide spread type reflector, 12 inches.

Finished in aluminum.

No. **1742**..................each **$25.00**

Graybar Miller Ultra-Violet Lamps

No. 9

Lamps operate on 108–118-volt, 60-cycle a.c. (lamps for other voltages and cycles can be supplied). The udezine tubes make the necessary electrical contact as they go together—no tools or wiring required.

No. 9

Designed with the Udezine principle providing three lamps in one. Has outlet under base for inserting automatic time switch.

Furnished complete with column, one 18½-inch Udezine tube and one 15½-inch tube.

Diameter of reflector, 12 inches.

Finished in ivory with black stripes or in bronze with gold.

No. **9**.............each **$33.50**

No. 19

Similar in design to Sunlite No. 9. This lamp uses the Type S-1 Sunlight Lamp. It is more powerful in its ultra-violet application. Comes complete with a table model automatic time switch which operates the lamp up to a 30-minute period.

It is constructed with the Udezine principle providing several lamps in one. Casters are on the base for ease in moving from room to room.

Diameter of reflector, 16 inches.

Finished in bronze.

No. **19**...........each **$74.50**

No. 8

Designed with the Udezine principle providing five lamps in one. Includes outlet under base for inserting automatic time switch.

Furnished complete with two 25½-inch Udezine tubes and one 12½-inch tube.

Diameter of reflector, 12 inches.

Finished in ivory or in bronze.

No. **8**..........each **$31.50**

No. 29

This Sunlite is designed especially for hospital use for therapeutic purposes. It uses the Type S-1 Mazda Sunlight Lamp which is controlled by an automatic time switch which is part of each lamp. The lamp is of aluminum with rubber tired casters for ease in moving.

Height, 6½ feet extended, 5 feet closed.

Diameter of reflector, 16 inches.

Finished in polished aluminum.

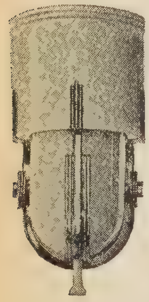
No. **29**........each **$149.50**

No. 8

Graybar Miller Nu-Mode Fixtures

Nu-Mode Lighting Fixtures are different in both design and lighting effect, yet they are adaptable to all types of lighting requirements.

Their use in commercial interiors, shops, and certain types of houses will add color, a touch of modernity and individuality to the surroundings.



No. 1853 Bracket

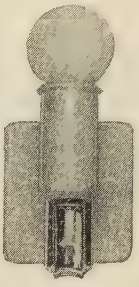
Length, 5¼ inches. Diameter, 3⅞ inches. Projection, 2⅞ inches.

Chain pull switch. No. 6337 glass shade.

Bracket packed 1 to an individual container; 6 to a standard package, weight 11 pounds.

Shade packed 6 to a standard package, weight, 5 pounds.

No. **1853**........each **$4.50**
No. **6337**........each **1.25**



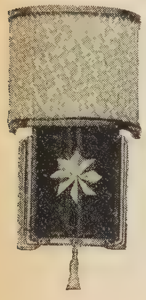
No. 1852 Bracket

Length, 4¾ inches. Diameter, 3⅜ inches. Projection, 2⅜ inches.

Chain pull switch.

Packed 1 to an individual container; 6 to a standard package, weight 8 pounds.

No. **1852**........................each **$3.75**



No. 1851 Bracket

Length, 4 inches. Diameter, 3⅜ inches. Projection, 3 inches.

Chain pull switch.

Bracket packed 1 to an individual container; 6 to a package, weight 12 pounds.

No. 6189 silk shade in gold, rosewood, cream, or sand. Packed 6 to a standard package, weight 1½ pounds.

No. **1851**........................each **$5.50**
No. **6189**........................each **1.90**

The lustre, delicacy, and refinement of these fixtures is due to the application of porcelain on metal. The unusual durability is also due to the same factor.

The units are finished in green, ivory, citrus yellow, blue, or black with trim in choice of real gold plate or chromium.

No. 1811 Fixture

Length, 3¼ inches. Diameter, 4¾ inches. Keyless or chain pull switch.

Fixture packed in an individual container; 6 to a package, weight 9 pounds.

No. 5910 glass shade. Diameter, 5½ inches; 2¼-inch fitter. May be used on any fixture. Packed 6 to a standard package, weight 6 pounds.

		Keyless	Pull
No. **1811**, with Stars (as Illustrated)	each	**$4.00**	**$4.50**
No. **1812**, with Bars in Place of Stars	each	**4.50**	**5.00**
No. **1810**, without Bars or Stars	each	**3.00**	**3.50**
No. **5910**, Glass Shade	each	**1.00**	**1.00**

No. 1822 Fixture

Length, 3¼ inches. Diameter, 4¾ inches. Keyless or chain pull switch.

Packed 1 to an individual container; 6 to standard package, weight 10 pounds.

		Keyless	Pull
No. **1822**, with Bars	each	**$4.50**	**$5.00**
No. **1821**, with Stars	each	**4.00**	**4.50**
No. **1820**, Plain	each	**3.00**	**3.50**

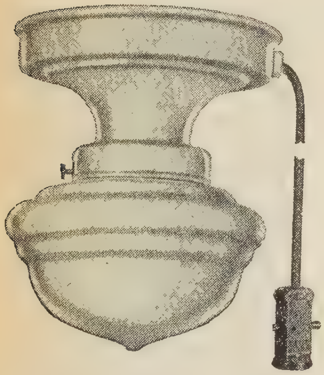
No. 1832 Fixture

Length, 3¼ inches. Diameter, 4¾ inches. Keyless or chain pull switch.

Packed 1 to an individual container; 6 to standard package, weight 10 pounds.

		Keyless	Pull
No. **1832**, with Bars	each	**$4.50**	**$5.00**
No. **1831**, with Stars	each	**4.00**	**4.50**
No. **1830**, Plain	each	**3.00**	**3.50**

Graybar Special Luminaires



No. K10 Service Receptacle and Switch

The Graybar K-Type Luminaire is constructed of 5-ply, white porcelain enamel fused into a heavy armco iron base. The porcelain will neither crack, blister, nor peel off. It can be wiped with a damp cloth to restore its original whiteness and lustre.

The shells are made in one piece and are seamless, thus eliminating crevices as possible dirt collectors.

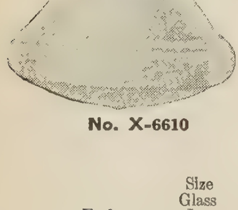
The diffusing globe (Cat. No. 2519) is made of fine opal homogeneous glass, shaped to give a pleasing appearance when used with the K-Type Holder.

The unit is made in three types—K10 for use where service receptacle and switch are desired; K20, where switch only is required; and K30 for locations where neither switch nor receptacle is necessary.

Fixture Only—No Glass

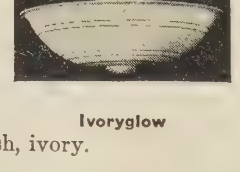
K10..............each **$5.00**
K20..............each **3.20**
K30..............each **2.60**

No. K20 with Pull Chain Switch



No. X-6610

Cat. No.	Each	Size Glass In.	Size Lamp Watts
XC-6675	**$1.50**	9x4	60–75
XC-6680	**2.10**	10x4	100
XC-6610	**3.20**	12x4	150



Ivoryglow

Finish, ivory.

Cat. No.	Each	Std. Pkg.	Size Lamp Watts
IG-2	**$2.80**	24	75 to 150

Convert-A-Lite

Finish, ivory with black stripe or green with gold stripe.

Cat. No.	Each	Diam., In. Top	Diam., In. Bottom	Size Lamp Watts
498	**$3.50**	14	4	100–150
499	**3.50**	14	4	200
500	**2.80**	11	4	100–150

Graybar Lighting Accessories

Beam Light

Cat. No.	White Enamel Each	Ivory Each	Pol. Chrom. Each	Socket
1088	$1.00	$1.00	$1.30	Keyless
1089	1.10	1.10	1.50	Pull

Fixture Only. Wired

With 4-Inch Fitter

Cat. No.	White Enamel Each	Stat. Bronze Each	Pol. Chrom. Each	Socket
1111	$.80	$1.00	$1.30	Keyless
1110	1.10	1.30	1.50	Pull
With 6-Inch Fitter				
1084	....	$1.30	$1.90	Keyless
1083	....	1.50	2.10	Pull

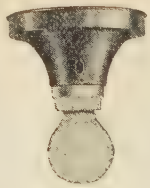
Ceiling Band Screw Type Holder

Wired with two sockets for emergency lighting.

Has 6-inch fitter.

Finish, statuary bronze and English bronze.

Cat. No. X-1054..........each **$3.00**



Closet Light

Size, 4½x2 inches.

Cat. No.	White Enamel Each	Pol. Chrom. Each	Socket
1116	$.80	$1.00	Pull
1133	.60	.80	Keyless

Fixture Only

Fitter, 2¼ inches.

Chain pendant, 33 inches long.

Finishes, white enamel, statuary bronze, and ivory.

Cat. No. **1055**, Wired with Key Socket.................each **$1.90**

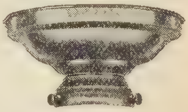
Cat. No. **1154**, Wired with Pull Chain Socket...........each **2.10**

MC Shelcrest Beam Light

Shelcrest Beam Light made of bakelite.

Finish, Japanese bronze.

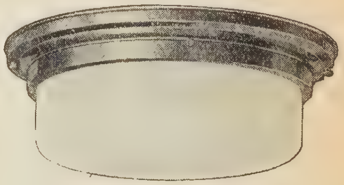
Cat. No. MC.............each **$2.50**



Fixture Only

With 2¼-Inch Fitter

Cat. No.	White Enamel Each	Stat. Bronze Each	Pol. Chrom. Each	Socket
1126	$.70	$.70	$.90	Keyless
1127	1.00	1.00	1.20	Pull
With 3¼-Inch Fitter				
1128	$.80	$.90	$.90	Keyless
11003	1.00	1.10	1.30	Pull



Fixture, Less Glass

Wired with two sockets, reflector plate and cross bar.

Cat. No. **A310**, 10-In. Fitter. ea. **$6.50**

Cat. No. **A312**, 12-In. Fitter. ea. **7.80**

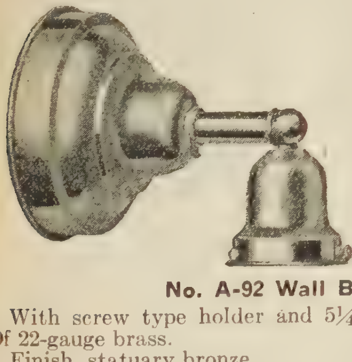
Cat. No. **A314**, 14-In. Fitter. ea. **10.10**

Fixture Complete with White Glass

Wired with two sockets, reflector plate and cross bar.

Standard finishes, statuary bronze and pewter.

Cat. No.	Each	Canopy In.	Fitter In.	Depth, In. Over All	Brass Gauge
A216	$13.70	14	12	5	22
A217	11.50	12	10	4¼	22
A218	16.60	16	14	6⅛	20



No. A-92 Wall Bracket

With screw type holder and 5¼-inch diameter canopy. Of 22-gauge brass.

Finish, statuary bronze.

Cat. No. A-92..................................each **$2.60**

No. 1125 Bathroom Bracket

Fixture Only

Wired with pull socket.

Fitter, 4½x3x2¼ inches.

Cat. No.	White Enamel Each	Stat. Bronze Each	Pol. Chrom. Each
1125	$1.00	$1.00	$1.10

No. X-1053 Wall Bracket, Wired

With screw type holder. Of 22-gauge brass.

Finish, statuary bronze and English bronze.

Cat. No. **X-1053**, with 2¼ or 3¼-Inch Socket Cover. ea. **$2.50**

Cat. No. **X-1053**, with 4-Inch Socket Cover........................each **$2.90**

Bathroom Bracket

Furnished with porcelain socket.

Finish, polished chromium.

Without Convenience Outlet

Cat. No. **1075**, Turn Knob Socket... **$2.70**

Cat. No. **1049**, Keyless Socket...... **2.50**

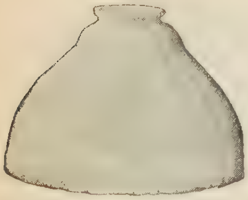
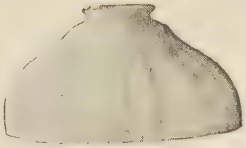
With Convenience Outlet

Cat. No. **1098**, Turn Knob Socket... **$3.40**

Cat. No. **1048**, Keyless Socket...... **3.20**

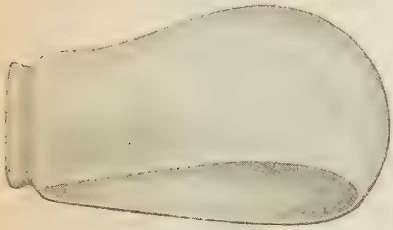
No. 1048

Graybar Miscellaneous Glassware

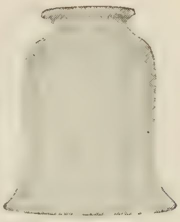
Nos. G-340 to G-342 Nos. G-346 to G-348

Cat. No.	Each	Diam Inches	Depth Inches	Fitter Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
G-340	$.80	6	4½	2¼	24	27
G-341	1.00	7	5⅛	2¼	16	28
G-342	1.50	8	5⅞	2¼	12	25
G-346	.80	7	2¾	2¼	36	32
G-347	1.10	7½	3⅝	2¼	36	40
G-348	1.20	9	3⅞	2¼	24	34



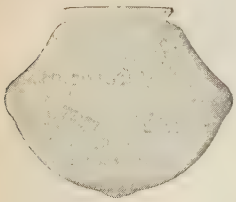
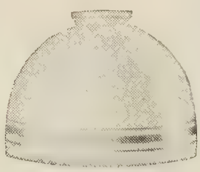
No. G-446 No. 1-5022

G-446	$.70	4	6¼	2¼	36	32
I-5022	.70	4	5¾	2¼	12	10



No. G-975 or 747 No. 1-6015 No. 1-5068

G-747	$.50	4¾	4⅝	2¼	24	32
G-975	.80	6⅛	5	2¼	27	37
I-6015	.50	4⅜	...	2¼	12	10
I-5068	.80	4	...	2¼	48	42
I-5069	1.00	6	...	2¼	30	31
I-5070	1.50	7	...	2¼	24	38

No. C-2519 No. G-640

C-2519	$.90	8	6½	4	12	20
G-640	1.00	7	5¼	2¼	24	35
G-641	1.50	8	5¾	2¼	16	28
G-642	1.70	9	6¾	3¼	12	25

Graybar Inland Small Ball Globes

Opal

Ruby Exit

Cat. No.	Each	Description	Size Inches	Std. Pkg.	Pkg. Wt. Lbs.
2412	$.60	Snow White	3¼x6	27	45
2412	.60	Crystal, Roughed Inside	3¼x6	27	45
2412	1.60	Ruby	3¼x6	8	20
2416	.80	Snow White	3¼x7	12	38
2416	.80	Crystal, Roughed Inside	3¼x7	12	38
2416	2.00	Ruby	3¼x7	12	20
2420	.90	Snow White	3¼x8	8	27
2420	.90	Crystal, Roughed Inside	3¼x8	8	27
2420	2.50	Ruby	3¼x8	8	27
2422	.90	Snow White	4 x8	8	27
2422	.90	Crystal, Roughed Inside	4 x8	8	27
2422	2.50	Ruby	4 x8	8	27

Ruby Exit Ball Globes

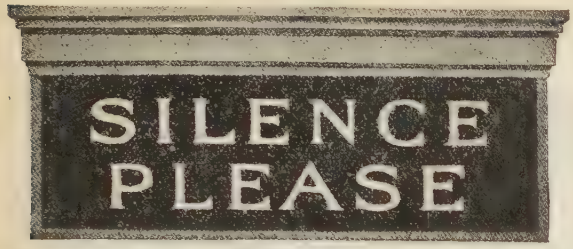
Cat. No.	Each	Description	Dia. In.	Dph. In.	Fitter In.
608/2057	$2.80	6-Inch Ruby Ball, Exit 1 Side	6	6	3¼
608/2058	3.10	6-Inch Ruby Ball, Exit 2 Sides	6	6	3¼
608/2057	3.40	7-Inch Ruby Ball, Exit 1 Side	7	7	3¼
608/2058	3.90	7-Inch Ruby Ball, Exit 2 Sides	7	7	3¼
608/2057	4.10	8-Inch Ruby Ball, Exit 1 Side	8	8	4
608/2058	4.60	8-Inch Ruby Ball, Exit 2 Sides	8	8	4

No. K-841 R-1 Exit
For Side Bracket
3-Inch Letters, Red

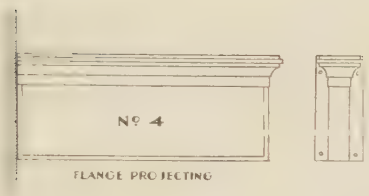
No. K-842 R-1
3-Inch Letters, Red

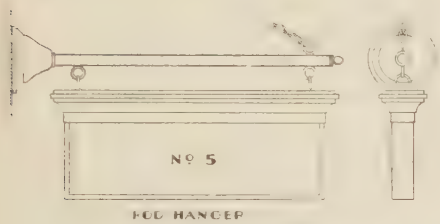
Cat.	No.	Decoration No.	Each	Description	Dia. In.	Depth In.	Fitter In.
K841	Exit	R-1	$2.10	Royal Copper, Roughed Inside	5¼	4½	3¼
K841	Exit	G-2	1.90	Green, Roughed Inside	5¼	4½	3¼
K841	Exit	C-3	1.90	Crystal, Roughed Inside	5¼	4½	3¼
K841	Stairs	R-1	2.10	Royal Copper, Roughed Inside	5¼	4½	3¼
K841	Men	N-4	1.90	Nicco	5¼	4½	3¼
K841	Women	N-5	1.90	Nicco	5¼	4½	3¼
K842	Exit	R-1	2.90	Royal Copper, Roughed Inside	6	6	3¼
K842	Exit	G-2	2.65	Green, Roughed Inside	6	6	3¼

Perlite Drawn Bronze Directional Signs



Frame Sign





Basic Styles for All Combinations

Designate by number in connection with inquiry or order for basic styles.

Almost any size can be furnished in this type of sign, to which a wide variety of drawn bronze moulding may be applied.

A variety of glass faces can also be furnished, the most popular being black flashed glass with white incised letters or white opal glass with embossed white letters and sprayed background. All types of colored glasses can be furnished. Also made with plate glass faces, edge-light type.

Can be lettered with any inscription desired.

Single Face

Height Inches	Length of Glass, Inches: 14 Each	16 Each	18 Each	20 Each	22 Each	24 Each
4	$31.20	$34.20	$37.20	$38.70	$40.20	$41.70
6	33.60	36.70	40.20	41.85	43.50	45.15
8	34.80	39.00	43.20	45.30	47.40	49.50

Double Face

4	$34.80	$37.70	$41.40	$43.05	$44.70	$46.35
6	37.20	41.40	45.60	47.70	49.80	51.90
8	40.80	45.40	50.40	52.80	55.20	57.60

If rods or chains are required for hanging add to above as follows:

Bronze Chain	per foot	$ .45
Bronze Ceiling Canopies	each	1.50
Bronze Rod, Complete, for 14, 18 or 26-Inch Signs		8.75

For hanging type sign from ceiling, chains and ceiling canopies will be furnished in place of rod hanger for No. 5.

Perlite Exit Signs

Constructed of galvaneeled steel in oxidized bronze lacquer finish.

Faces are of opal glass with white letters on a red or green stenciled background or red or green stenciled letters on a white background.

All signs are equipped with socket holders. Additional charge for sockets, 50 cents each.

Style E-2

Flat Wall Type—Open Back

Size Letters	inches	5	6	8
Size Glass	inches	6x12	7¾x12	9½x13
Steel	each	$3.00	$3.50	$4.25
Copper	each	4.00	4.75	5.75

Style E-T

Double Face Triangular Type—Open Back

Size Letters	inches	5	6	8
Size Glass	inches	6x12	7¾x12	9½x13
Steel	each	$7.50	$8.50	$10.50
Copper	each	10.00	12.00	14.50

Style E-R

Flush Wall Type—Open Back

Size Letters	inches	5	6	8
Size Glass	inches	6x12	7¾x12	9½x13
Steel	each	$4.00	$4.50	$5.25
Copper	each	6.25	7.00	8.00

Flashed Glass Faces

Ruby or green in standard sizes at extra charge as follows:

5-Inch Letters	each face	$3.50
6-Inch Letters	each face	4.00
8-Inch Letters	each face	5.00

Special Inscriptions

Words as men, women, check room, etc. will be supplied to fit these signs at an extra charge of $5.00 per face.

Day-Brite Exit Signs

No. 2800 Series with Rigid Frames Holding Glass

No. 2900 Series with Hinged Frames for Glass

Boxes on flush type signs, 14-gauge steel; knockouts for ½-inch conduit on all 4 sides. Boxes on surface type, 20-gauge steel or bronze; outlet for connection in back.

Covers, 16-gauge metal; hinged frames on 2900 Series of 18-gauge rolled moulding. Each sign is complete with 2 porcelain sockets to attach to collapsible wiring trough.

Ruby glass with white lettered effect is standard; other glass combinations, extra. Finish: steel, any standard spray; bronze, any standard plate.

Flush Type

Size Letters Inches	Overall Trim Inches Ht.	Overall Trim Inches Wdth.	Box Size Inches Ht.	Box Size Inches Wdth.	Box Size Inches Dpth.	Steel Cat. No.	Steel Each	Bronze Cat. No.	Bronze Each
3, 4 or 5	9¼	13¼	8	12	3½	2800	$10.00	2810	$12.50
6	10¼	14¼	8¾	13	3½	2801	11.00	2811	13.50
8	12¼	16¼	10¾	15	3½	2802	13.00	2812	16.00
3, 4 or 5	9¼	13¼	8	12	3½	2900	12.00	2910	15.25
6	10¼	14¼	8¾	13	3½	2901	13.00	2911	16.00
8	12¼	16¼	10¾	15	3½	2902	15.25	2912	19.00

Surface Type

Size Letters Inches	Overall Size Inches Ht.	Overall Size Inches Wdth.	Overall Size Inches Dpth.	Steel Cat. No.	Steel Each	Bronze Cat. No.	Bronze Each
3, 4 or 5	9¼	13¼	3½	2820	$8.75	2830	$13.00
6	10¼	14¼	3½	2821	9.25	2831	14.00
8	12¼	16¼	3½	2822	11.00	2832	16.25
3, 4 or 5	9¼	13¼	3½	2920	10.50	2930	15.75
6	10¼	14¼	3½	2921	11.25	2931	16.75
8	12¼	16¼	3½	2922	13.00	2932	19.00

Day-Brite Interior Electric Signs

Thin model sign takes clear glass only; letters are sand blasted on reverse side; light is diffused through top edge of glass to give green letter effect. Wide model is for opaque glass with raised letters; background matches color of frame; when lighted, letters are illuminated. Various style mountings in single and double face.

Prices and further information upon application.

Day-Brite Pedestal Signs

Bases on pedestal supports drilled for screwing direct to counter. Equipped with toggle switch.

Wire leads through base, unless otherwise specified.

Height of standard, exclusive of sign, 13½ inches.

Type FR, illustrated, has cast bronze base and standard. Diam. of base, 6 in.

Type FS has square standard and base; 4, 5 or 6-in. bases can be furnished.

Prices and further information upon application.

Day-Brite Show Case Reflectors Unwired

For T-10 Tubular Lamps

For One Lamp

Drawn brass with porcelain socket. Length, 9 in. Standard package, 12. Height 1⅞ inches; width 2⅜ inches.

Price, No. **90**, Statuary Bronze Plated..........each **$2.50**
Price, No. **91**, Aluminum Spray Finish..........each **2.00**

For Two Lamps

No. 190 is made of brass, No. 191 of steel. Furnished with twin porcelain socket. Length, 18 in. Standard package, 6.

Price, No. **190**, Statuary Bronze Plated.........each **$5.25**
Price, No. **191**, Aluminum Spray Finish.........each **4.20**

Note.—With Nos. 90 and 190, use ⅜-in. brass tubing. With Nos. 91 and 191, use 5/16-in. flexible steel conduit or ½-in. brass tubing.

For Intermediate Base Lamps

For One T-6½ Tubular Lamp

Drawn brass with porcelain socket. Length, 8½ in.; width, 1¾ in.; height, 1⅜ in. Standard package, 12.

Price, No. **80**, Statuary Bronze Plated..........each **$2.50**
Price, No. **81**, Aluminum Spray Finish..........each **2.00**

For Two T-6½ Tubular Lamps

No. 180 is made of brass, No. 181 of steel. Furnished with 2 single porcelain sockets. Length, 18 in.; width, 1¾ in.; height, 1⅜ in. Standard package, 6.

Price, No. **180**, Statuary Bronze Plated.........each **$5.10**
Price, No. **181**, Aluminum Spray Finish.........each **4.20**

Note.—With Nos. 80 and 180, use ⅜-in. brass tubing. With Nos. 81 and 181, use 5/16-in. flexible steel conduit or ½-in. brass tubing.

Hanging clips and screws are included in above prices.

Special Finishes.—For plated finishes other than standard, 20 per cent additional; spray finishes, 10 per cent.

Day-Brite Assembled Show Case Fixtures

With Rigid Sockets

For T-10 Standard Base Tubular Lamp
For T-6½ Intermediate Base Tubular Lamp

No. 9042

Made up of standard No. 90 (T-10 lamp size) or No. 80 (T-6½ lamp size) single units; connected with ⅜-inch rigid brass tubing which is inserted into reflector and fastened with set screws. Statuary bronze plated finish.

Prices are for complete fixtures, assembled and wired and include all necessary parts and switch but no lamps. Reflectors are spaced evenly to give best results. Prices figured to nearest foot of case.

When ordering, give dimensions; inside length, inside width and inside height; specify whether all glass, wood or metal case. If case has oval ends, send template. To specify end to have connection, face back of case.

For cases longer than listed, add 50 cents for each foot of case; each extra reflector, $2.75. Finish other than standard, 20 per cent extra. Vertical tubing over 42 inches, 30 cents per foot. Standard package, 1 set.

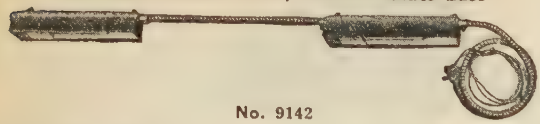
Unit for T-6½: height, 1½ inches; width, 1¾ inches; length, 8½ inches. Unit for T-10: height, 2⅛ inches; width, 2⅜ inches; length, 9 inches.

Size Case Feet	No. of Lights	For T-6½ Lamp Cat. No.	For T-6½ Lamp Each	For T-10 Lamp Cat. No.	For T-10 Lamp Each
4	2	8042	$11.00	9042	$11.00
5	2	8052	11.50	9052	11.50
5	3	8053	14.25	9053	14.25
6	2	8062	12.00	9062	12.00
6	3	8063	14.75	9063	14.75
6	4	8064	17.50	9064	17.50
8	3	8083	15.75	9083	15.75
8	4	8084	18.50	9084	18.50
10	3	8003	16.75	9003	16.75
10	4	8004	19.50	9004	19.50
10	5	8005	22.25	9005	22.25

Day-Brite Assembled Wall Case Fixtures

With Rigid Sockets

For T-10 Tubular Lamp —Standard Base
For T-6½ Tubular Lamp—Intermediate Base



No. 9142

Especially designed for small wall display cases where reflector can be concealed. The assembly consists of the standard No. 91 unit (T-10 lamp size) or No. 81 (T-6½ lamp size) connected with 5/16-inch steel flexible conduit.

Standard finish, aluminum spray; other finishes, extra.

Prices are for complete fixtures, wired and assembled, ready to install with all fittings except switch and lamps.

Three-foot lead furnished with each fixture for electrical connection; longer lengths, 25 cents per foot extra.

To specify end to have electrical connection, face front of case. Reflectors are spaced evenly.

For assemblies larger than listed, add 25 cents per foot for each additional foot of case; for each additional reflector, $2.25. Standard package, 1 set.

Unit for T-6½ lamp: height, 1½ inches; width, 1¾ inches; length, 8½ inches. Unit for T-10 lamp: height, 2⅛ inches; width, 2⅜ inches; length, 9 inches.

		For T-6½ Lamp		For T-10 Lamp	
Size Case	No. of Lights	Cat. No.	Each	Cat. No.	Each
4	2	8142	$6.50	9142	$6.50
5	2	8152	6.75	9152	6.75
5	3	8153	9.00	9153	9.00
6	2	8162	7.00	9162	7.00
6	3	8163	9.25	9163	9.25
6	4	8164	11.50	9164	11.50
8	3	8183	9.75	9183	9.75
8	4	8184	12.00	9184	12.00
10	3	8103	10.25	9103	10.25
10	4	8104	12.50	9104	12.50
10	5	8105	14.75	9105	14.75

Day-Brite Continuous Show Case Fixtures

No. 1912

Can be used in any standard floor case. With porcelain enameled steel reflecting surface and porcelain sockets. Furnished with elbow connector at one end and 8-foot lead wire. Specify end to have connection facing back of case. Prices do not include tubing, fittings to electrical connections or lamps.

For T-10 Standard Base Tubular Lamps

Twin sockets on approximate 24-inch centers.

Single sockets on approximate 18-inch centers.

Height, 1¾ inches; width opening, 2⅛ inches; length, continuous.

Cat. No.	Description	Per Foot
1912	Drawn Steel, Any Spray Finish	$3.00
1900	Drawn Steel, Statuary Bronze, Gun Metal or Nickel-Plated Finish	3.30
1911	Drawn Brass, Natural, Bank or Statuary Bronze, Gun Metal or Nickel-Plated Finish	3.80

For T-6½ Intermediate Base Tubular Lamps

Wired with single porcelain sockets on approximate 18-inch centers.

Height, 1½ inches; width, 1⅞ inches; length, continuous.

Cat. No.	Description	Per Foot
1802	Drawn Steel, Any Standard Spray Finish	$2.50
1800	Drawn Steel, Statuary Bronze, Gun Metal or Nickel-Plated Finish	3.00
1801	Drawn Brass, Natural, Bank or Statuary Bronze, Gun Metal or Nickel-Plated Finish	3.50

End Fittings

Complete Set for Front Feed....................each $2.25
Complete Set for Back Feed....................each 2.90

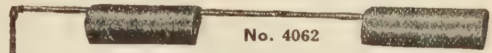
Specify type of case so that proper mounting clip will be provided.

Day-Brite Assembled Refrigerator Fixtures

For 6-Inch T-10 Tubular Lamps

For exterior lighting of refrigerator cases. Consists of No. 40 reflectors, assembled and wired; with switch, no lamps. Face back of case to state end to have connection.

Assemblies listed are for fixtures to be mounted on wood or metal frame cases; for glass case assemblies add 50 cents to each reflector in complete set.



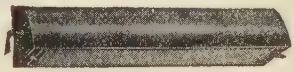
No. 4062

Polished nickel, standard finish; chromium, 10 per cent extra. Standard package, 1 set.

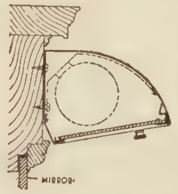
Cat. No.	Each	Case Ft.	No. of Lights	Cat. No.	Each	Case Ft.	No. of Lights
4062	$14.50	6	2	4023	$21.50	12	3
4082	15.50	8	2	4024	25.50	12	4
4083	19.50	8	3	4043	22.50	14	3
4003	20.50	10	3	4044	26.50	14	4
4004	24.50	10	4	4046	34.50	14	6

Day-Brite Fitting Room Reflectors

Standard 18-Inch Units



This fixture is made in standard 18-inch sections. Has removable frame with diffusing glass and levolier pull chain switch at right hand end facing fixture.



For two standard lamps to 50 watts each. Wired complete, ready for installation.

No. 2970 is steel, any standard spray finish; No. 2971 is brass, any standard plate finish.

Height, 4 inches; width, 5½ inches.

Standard package, 6.

No. **2970**....................each **$13.50**
No. **2971**....................each **18.50**

Day-Brite Picture Reflectors

No. 720

These reflectors are adjustable in horizontal and vertical positions, and also at the fitting.

Furnished with 9 feet of silk cord and plug.

Standard package, 12 assorted.

For T-10 Tubular Lamps

Length Reflector Inches	No. of Lights	No. of Brackets	Steel Gold Spray Finish Cat. No.	Each	Brass Brush Brass Finish Cat. No.	Each
9	1	1	720	$7.00	730	$9.00
15	2	1	721	9.00	731	11.25
24	3	1	722	12.50	732	15.75
30	4	2	723	16.25	733	21.50
For 15-50-Watt Type A Lamps						
10	1	1	724	10.25	734	$12.50
15	2	1	725	11.75	735	15.00

Day-Brite Bracket Reflectors

For 25-Watt T-10 Tubular Lamps

No. 230

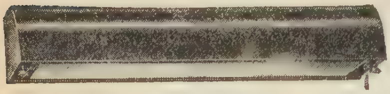
The Day-Brite line of bracket lighting embodies many styles and designs. The units listed are practical for most ordinary requirements. Equipped with porcelain enameled reflecting surface, porcelain keyless sockets, and wired complete.

Standard package, 3.

Finishes.—Steel, any standard spray; brass—bank, statuary bronze or brush brass.

Length Reflector Inches	Length Arm Inches	Style Socket	Steel Cat. No.	Steel Price Each	Brass Cat. No.	Brass Price Each
9	10	Single	245	$8.25	230	$10.00
15	10	Twin	244	9.00	229	12.00

Day-Brite Cashier Cage Reflectors
Standard 18-Inch Units



No. 1012

Equipped with removable frame and Silverite diffusing glass.

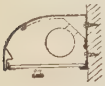
Reflecting surface of steel is porcelain enameled.

Twin porcelain socket and levolier switch on right bottom end; outlet in back center. Wired; ready to install.

Finishes: steel, any standard spray; brass—brush brass, natural, bank or statuary bronze.

Standard package, 6 assorted.

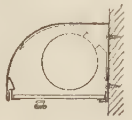
For 25-Watt T-10 Tubular Lamps



No. 1014

Height, 2¼ inches; width, 3½ inches; length, 18 inches.
No. **1014**, Steel..each **$12.00**
No. **1024**, Brass.each **15.50**

For 15-25-Watt Type A Lamps

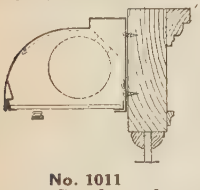


No. 1012

Height, 3¼ inches; width, 4¼ inches; length, 18 inches.
No. **1012**, Steel..each **$12.50**
No. **1022**, Brass.each **17.00**

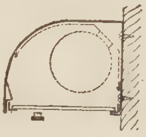
For 15-60-Watt Type A Lamps

Height, 4 inches; width, 5 inches; length, 18 inches.



No. 1011

No. **1011**, Steel..each **$13.25**
No. **1021**, Brass.each **18.25**

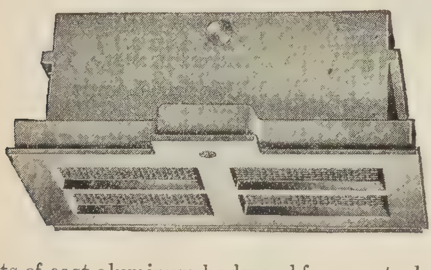


No. 1010

No. **1010**, Steel..each **$13.00**
No. **1020**, Brass.each **18.00**

Also in continuous lengths; prices on application.

No. S-5100 Day-Brite Pedestrian
Tunnel Lights



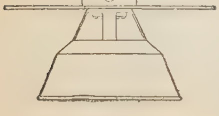
Consists of cast aluminum body and frame; steel porcelain enameled reflector, twin porcelain sockets for 2 lamps to 60 watts. Cover is hinged and equipped with either 16-gauge ¼-inch galvanized iron wire screen or ½-inch wire diffusing glass.

Overall size: length, 16¼ inches; width, 911/16 inches; depth, 7 inches.

Standard package, 1.

No. S-**5100**, with Flush Yale Lock..............each **$36.00**
No. S-**5100**, with Screw Fastening Instead of Yale Lock....................................each **33.00**

No. 5025 Day-Brite Library Stack Light And Stock Bin Reflectors



White porcelain enameled steel with 13⅝-inch porcelain top shade. For standard 60-watt lamp.

Height without outlet box, 6 inches; diameter of bowl, 9¼ inches.

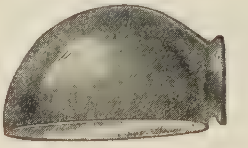
No. **5025**................each **$4.00**

Plain Cone Glass Shades

Depth, 5 inches.

Cat. No.	Diam. In.	Fitter In.	Price per Doz
170	10	2¼	$12.00
64	7	2¼	7.50

No. 0697 Plain Emeralite Half Shades



Pure white opal glass, plated outside with a rich emerald green. For 16 c. p. lamps. Twelve dozen in a case. Weight, 165 pounds.

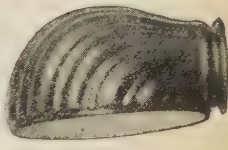
No.	Fitter In.	Lgth. In.	Width In.	Price per Doz.
0697	2¼	6	4½	$14.40

Emeralite Ribbed Glass Half Shades

No. 0713 is 5½ inches long, 4 inches wide, 2¼ inches fitter.

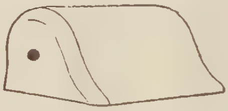
Packed 12 dozen in a case.

Weight, 150 pounds.



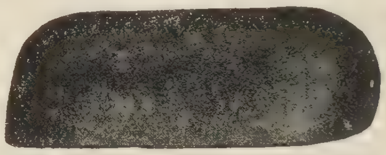
Price, No. **0713**............................dozen **$14.40**

No. ES 400 Esrobert Greenalite Shades



Price. No ES **400** ....each $3.00

No. 4378 Emeralite Shades



For use only with old type Emeralite desk lights.

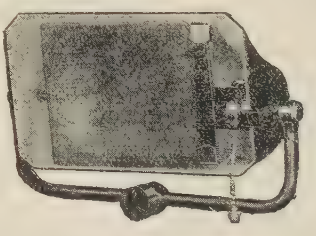
Length, 8½ inches.

Price, No. **4378**.............................each **$3.00**

No. 8734 Emeralite Shades

For new type Emeralites.
Price, No. **8734**.................................each **$3.00**

No. MG-303 Esrobert Day-Light Screens for Greenalite Lamps



The day-light screen is an added feature of Greenalite. A day-light screen of special quality and special design is furnished to provide a natural daylight effect. Screen provides even distribution of light.

All Greenalite lamps are furnished with day-light screen without extra charge.

For best results, a standard 50-watt inside frosted bulb should be used.

Price, No. MG-**303** (Screen Only)...............each **$1.50**
Price, No. ES **399** (Screen with Holder).........each **2.50**

Hubbell Metal Reflectors

For brass reflectors in polished nickel or in statuary bronze finish, add 50 per cent to price. All other special finishes, prices upon application.

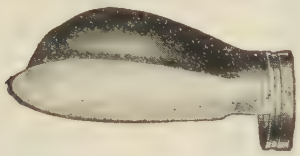
White interior furnished without extra charge. Aluminum or steel reflectors cannot be furnished in a plated finish.

Regularly fitted with holders for brass shell sockets.

If desired for weatherproof sockets, place the letter P after the catalogue number and add $12.00 per 100 to list price.

The Nos. 6151 and 6152 Half Reflectors cannot be supplied with P holder.

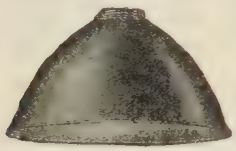
Half Reflectors
With Adjustable Holder



Carton, 10. Standard package, 50.

Cat. No.	Per 100	Metal	Finish	Size Lamp Watts	Wt.,Lbs. Std. Pkg.
6151	**$30.66**	Steel	Green and White.....	15	10
6152	**67.68**	Brass	Brush Brass and Frosted.....	15	11
5429	**38.00**	Steel	Green and White.....	25–40–60	13
5532	**60.00**	Brass	Brush Brass and Frosted.....	25–40–60	12
6789	**43.22**	Steel	Lacco Brass and Frosted.....	25–40–60	14

Parabola Reflectors
With Holder at Top—Size 6½ Inches

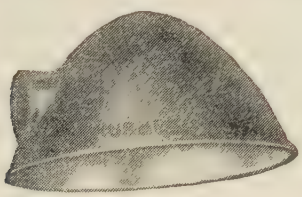


These reflectors are furnished with direct threading neck rather than contractile collars (No. D1675) for fastening the reflector to brass shell sockets. This is done to permit the use of these particular reflectors on brass shell sockets equipped with a combination thread and bead shade holder fastening. The reflectors furnished with contractile collars cannot be used with combination thread and bead sockets.

Carton, 6. Standard package, 30.

Cat. No.	Per 100	Metal	Finish	Size Lamp Watts	Wt.,Lbs. Std. Pkg.
6094	**$65.14**	Steel	Green and Frosted..	25–40–60	20
6548	**111.10**	Brass	Brush Brass and Frosted.....	25–40–60	20
6549	**76.56**	Alum.	Green and Frosted..	25–40–60	18

Parabola Reflectors
With Adjustable Holder—Size 6½ Inches

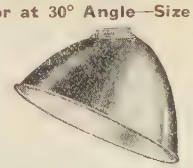


Carton, 10. Standard package, 50.

Cat. No.	Per 100	Metal	Finish	Size Lamp Watts	Wt.,Lbs. Std. Pkg.
5564	**$64.64**	Steel	Green and Frosted...	25–40–60	30
5571	**110.10**	Brass	Brush Brass and Frosted.....	25–40–60	30
5461	**77.26**	Alum.	Green and Frosted...	25–40–60	25
6788	**71.00**	Steel	Lacco Brass and Frosted.....	25–40–60	30

Hubbell Metal Reflectors

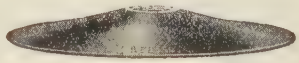
Parabola Reflectors
With Holder at 30° Angle—Size 6½ Inches



Carton, 6. Standard package, 30.

Cat. No.	Per 100	Metal	Finish	Size Lamp Watts	Wt.,Lbs. Std.Pkg.
*6550	$67.02	Steel	Green and Frosted...	25–40–60	15
*6551	111.10	Brass	Brush Brass and Frosted.....	25–40–60	15
*6552	76.76	Alum.	Green and Frosted..	25–40–60	12

Flat Reflectors
For Brass Shell Sockets



Carton, 10. Standard package, 100.

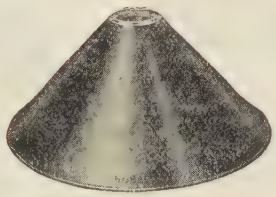
Cat. No.	Per 100	Reflector In.	Metal	†Finish	Size Lamp Watts	Wt.,Lbs. Std.Pkg.
*5431	$31.00	8	Tin	Green, White...	15–25–40	35
*5432	40.80	10	Tin	Green, White..	25–40–60	45
*5433	48.08	12	Tin	Green, White...	25–40–60–100	55

For Weatherproof Sockets

Carton, 10. Standard package, 100.

6751	$42.02	8	Tin	Green, White...	15–25–40	35
6752	50.40	10	Tin	Green, White...	25–40–60	45
6753	57.78	12	Tin	Green, White...	25–40–60–100	55

Cone Reflectors
For Brass Shell Sockets



Carton, 10. Standard package, 100.

Cat. No.	Per 100	Reflector In.	Metal	†Finish	Size Lamp Watts	Wt.,Lbs. Std.Pkg.
*5440	$32.42	8	Tin	Green, White...	15–25–40	42
*5441	44.60	10	Tin	Green, White...	25–40–60	60
*5442	60.00	12	Tin	Green, White...	40–60–100	80

For Weatherproof Sockets

Carton, 10. Standard package, 100.

6760	$45.92	8	Tin	Green, White...	15–25–40	60
6761	64.60	10	Tin	Green, White...	25–40–60	90
6762	77.16	12	Tin	Green, White...	40–60–100	110

*Furnished with direct threading neck rather than contractile collars for fastening the reflector to brass shell sockets. This is done to permit the use of these particular reflectors on brass shell sockets equipped with a combination thread and bead shade holder fastening. The reflectors furnished with contractile collars cannot be used with combination thread and bead sockets.

†Can be furnished frosted aluminum finish inside, instead of white, at same price.

No. 8734½ Emeralite Portable Lamps

This is a popular pattern for flat top desks. It saves space by having inkwell in the base.

Height to top of shade, 18 inches.

Size of base, 7x7½ inches.

No. 8734½E

With inkwell in base.

Brushed Brass.....each **$15.00**
Statuary Bronze.....each **16.00**

No. 8734½ES

With Sengbusch inkwell.

Brushed Brass.....each **$18.50**
Statuary Bronze.....each **19.50**

No. 8734K Emeralite Portable Lamps

For flat top desks.

Base is 8 inches in diameter. Height to top of shade, 18 inches; shade is adjustable.

Finish, brush brass with black relief or statuary bronze.

Price, No. 8734K, Brush Brass Finish.....each **$12.00**
Price, No. 8734K, Bronze Finish.....each **13.00**

No. 8734B Emeralite Portable Lamps

Square pattern, 7-inch base, for flat top desk or table.

Height to top of shade, 18 inches. Illumination area 48 inches wide by 30 inches in front of base.

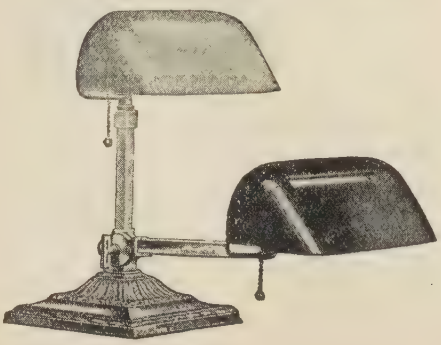
With white porcelain lined green glass shade and fitted with Daylight screen.

Furnished complete with shade, pull socket, plug and six-foot cord.

Finish is brushed brass, black relief.

Price, No. 8734B....each **$12.00**

No. 8734G Emeralite Portable Lamps



With adjustable arm. Size of base, 7 inches square.

The Emeralite shade is made of rich emerald green glass, white porcelain lined. Fitted with Daylight screen.

Furnished complete with shade, pull socket, plug and 6 feet of cord.

Price, No. 8734G, Brushed Brass with Black Relief .ea. **$12.00**

No. 0763/740 Emeralite Lamps

The practical base is made with pencil groove and equipped with Wahl pen.

Furnished complete with the double-duty shade and screen, and with base switch.

Standard finish, statuary bronze.

With Emeralite Brocade Shade
No. 0763/740/9612 **$29.00**
With Brown Brocade Shade
No. 0763/740/9617 **$31.50**

No. 0764/740 Emeralite Lamps

This is an ideal pen-set fixture. The large heavy base holds two pen sets and contains special groove for holding pencil.

Furnished in statuary bronze complete with shade and two Wahl pen-sets.

With Green Brocade Shade
No. 0764/740/1435.....each **$33.50**
With Brown Brocade Shade
No. 0764/740/1465.....each **$34.50**
With Brown Classic Border Shade
No. 0764/740/1547.....each **$35.50**
With Albinor Opaque Shade
No. 0764/740/1609.....each **$33.50**
With Rhodolite Opaque Shade
No. 0764/740/1563.....each **$36.00**

No. 9612B Emeralite Lamps

Equipped with the standard double-duty Emeralite shade, which has two lights and gives twice the reflection. Has round cornered screen, giving twice the Daylite area without any glare.

Furnished with base switch.

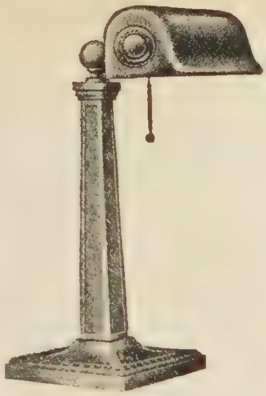
Length of shade, 12 inches.

No. 9612B, Statuary Bronze, Green Brocade Shade .....each **$19.00**
No. 9612B, Brass and Black, Green Brocade Shade.....each **18.00**
No. 9613B, Statuary Bronze, Plain Green Shade.each **17.50**
No. 9613B, Brass and Black, Plain Green Shade.each **16.50**
No. 9617B, Statuary Bronze, Brown Brocade Shade.....each **21.50**
No. 9703B, Statuary Bronze, Albinor Opaque Shade.....each **19.00**

GraybaR QUALITY SINCE 1909
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

No. 3230 Faries Verdelite Portables

With Adjustable and Detachable Green Glass Shade



Fancy solid brass portable.
For flat top desk or table. Height, 15 inches to center of shade. For 25 to 60-watt lamp.
Wired with nine feet of silk cord, pull chain socket and plug.
Standard package, 6.

Cat. No.	Description	Price Each
3230	Brushed Brass with Black Relief....	**$12.00**
3230	Statuary Bronze, Green Relief....	13.00

No. ES 467 Greenalite Portable Lamps

With Daylight Screen

A useful lamp for flat-top desks or tables. Equipped with one Sengbusch inkwell.

Has a Greenalite glass shade, 10-foot cord, approved socket, and 2-piece plug.

Base is 8x7⅛ inches and is felted.

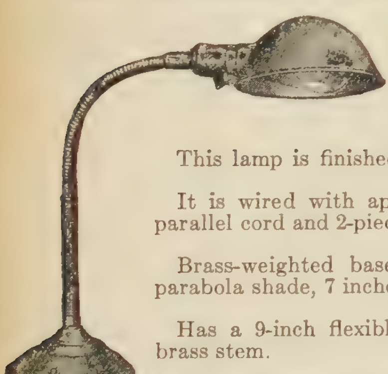
Maximum height, 17¾ inches.

Finish, antique bronze.

Shipping weight, 15 pounds.

No. ES **467**..........each **$16.00**

No. 0700 Mefcolite Portable Lamps



This lamp is finished in old brass.

It is wired with approved push socket, parallel cord and 2-piece plug.

Brass-weighted base, 5½ inches; brass parabola shade, 7 inches.

Has a 9-inch flexible arm and a 6-inch brass stem.

Price, No. **0700**..................each **$4.50**

No. 0714 Mefcolite Portable Lamps

This lamp has a carefully casted base of iron; full felted.
Has a selected flexible arm and a 7-inch parabola shade.
Wired with approved push socket, parallel cord and 2-piece plug.
Flexible arm, 12 inches.
Finished in statuary bronze.

Price, No. **0714**..each **$2.50**

No. 8734AM Emeralite Machine Lamps

For adding, posting and calculating machines supported by bracket which clamps leg of 1-inch tubular or U section stands.
The light can be adjusted in such a manner as to eliminate the glare reflected from keyboard and will also illuminate keys, platen, and shelf of any machine of the type illustrated.
Equipped with rich, emerald green glass shade, white porcelain-lined.
Daylight attachment is recommended for all machine lighting.
This lamp has vertical and horizontal adjustments.
Finish: Black enamel.
The No. 8734AM is furnished complete with bracket and 9-foot cord.
Price, No. **8734AM**, Complete as Described....each **$13.00**

No. 493 Esrobert Greenalite Portable Lamps

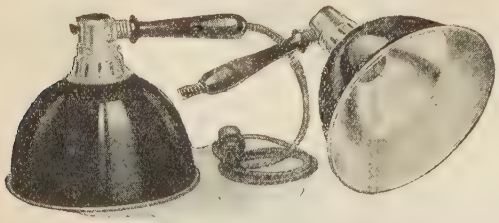
BASE.—Special clamp for adding machine stands.
SHADE.—Green glass. 8⅝x5¼x3¼ inches.
WIRING.—Pull-chain socket, 10 feet new code parallel mercerized cord, 2-piece plug.
MAXIMUM HEIGHT.—35½ inches.
MAXIMUM EXTENSION.—17½ inches.
FINISH. — Statuary bronze.
WEIGHT.—Packed, 6 lbs.
Price, No. **493** Each.. **$12.00**

No. 8734TW Emeralite Portable Lamps

A most efficient and practical fixture for stenographer's and flat-top desks. The base is covered with felt and held securely in place by means of special adjustable clamp at rear, clamping against underside of desk top. The arm and shade can be adjusted to any angle; and arm has extension adjustment to accommodate various widths of desks. Base, 4 inches square. Arm does not interfere with opening and closing of desk.

Price, No. **8734**TW.........................each **$14.00**

Thermolite Heat and Light Applicators



No. T0750 Hand Applicator

No. T0850 Table Model

In the Thermolite, light and heat are generated in a reflector so constructed that these soothing agents when applied to the aching parts penetrate the actual tissue, relaxing the congestion and relieving the pain.

The Thermolite is superior to hot water bags, poultices, and other surface heating appliances on account of its penetrative power and because it is many times more convenient.

No. T0750 Hand Applicator

The inside hand polished reflector, 9½ inches in diameter, is separated from outer shell by dead air space serving to insulate metal parts against heat.

Furnished complete with 120-volt 200-watt bulb, 9 feet of cord and plug.

Finish, crystalized black and nickel.

No. T0750.....each **$7.50**

No. T0850 Table Model

This table model comprises the No. 0750 Thermolite complete with full nickel finished flexible arm and stand. Outside reflector crystallized black.

Made with heavy felted base, permitting applicator to be adjusted to any angle.

No. T0850.....each **$10.00**

No. T0645 Folding Stand

No. T0645 Folding Stand

This stand is for use with No. 0750 applicator. It folds into a small package 20 inches long weighing 34 ounces, making it convenient for travel.

The hinged arm and ball jointed clamp permit adjustment of reflector in any position. Telescoping stem is adjustable from 28 to 68 inches.

Finish, polished nickel.

No. **T0645**, Stand Only with Clamp for Handle.....each **$5.00**

No. T 0696 Floor Stand

No. T0696 Floor Stand

This outfit is for home or office use where portability is not essential. Has heavy base and telescoping stem adjustable in height from 62 to 30 inches. Applicator is permanently attached to flexible arm.

Finished in white enamel and nickel.

No. **T0696**, Stand with No. 0750 Applicator.....each **$15.00**

No. **T0696**, Stand Only with Clamp on End of Arm.....each **7.50**

Extra Bulbs

110 120-Volt, 200 Watts.....each **$1.25**
32-Volt, 128 Watts.....each **2.00**
250-Volt, 200 Watts.....each **2.40**

No. 3182 Faries Adjustable Portables

With Adjustable One-Piece Metal Hood

For roll top desk or piano. Base, 7 inches. Extends 10 inches.

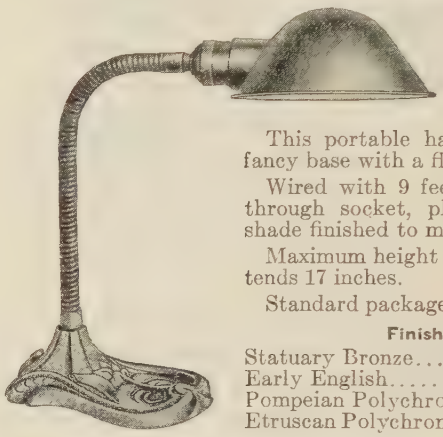
Swing portable with vertical adjustment and adjustable metal hood, frosted inside.

Wired with 9 feet of silk cord, pull chain socket and plug.

Standard package 6.

Price, No. **3182**, Brushed Brass.....each **$7.60**
Price, No. **3182**, Statuary Bronze.....each **7.60**

No. 3144 Faries Flexible Portables



This portable has a heavy cast fancy base with a flexible arm.

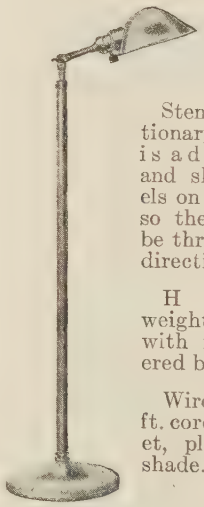
Wired with 9 feet of cord, push through socket, plug and No. 27 shade finished to match portable.

Maximum height is 23 inches. Extends 17 inches.

Standard package, 12.

Finish	Price, Each
Statuary Bronze	**$2.20**
Early English	**2.20**
Pompeian Polychrome	**2.70**
Etruscan Polychrome	**2.70**

Faries Adjustable Floor Portables

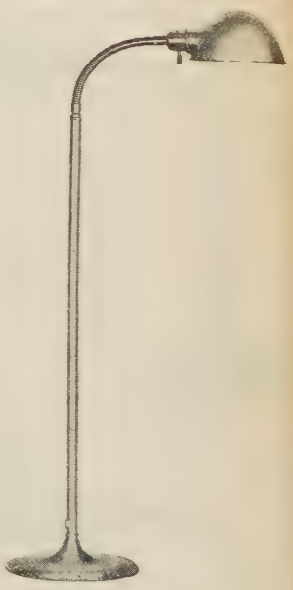


No. 3642

Stem is stationary. Arm is adjustable and shade swivels on the socket so the light can be thrown in any direction.

Heavy weighted base with felt covered bottom.

Wired with 9-ft. cord, key socket, plug and 27 shade.



No. 3266

No. 3642

Height, 48 inches. Arm, 11 inches over all. Standard package, 6.

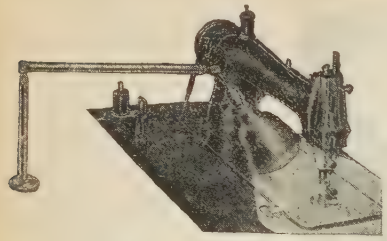
Price, No. **3642**, Statuary Bronze.....each **$6.20**
Price, No. **3642**, Brushed Brass.....each **5.80**

No. 3266

Height, 48 inches. Flexible arm 9 inches. Standard package, 6.

Price, No. **3266**, Statuary Bronze.....each **$6.45**
Price, No. **3266**, Brushed Brass.....each **6.00**

No. 250 Tafco Adjustable Lighting Brackets



Two sets universal joints for adjustment.

Flange base attaches to table. Base nipple extends through table into outlet box below, (furnished only when ordered).

Price.....each **$.20**
Standard pkg., 12.

When ordering state height of standard and length of arm.

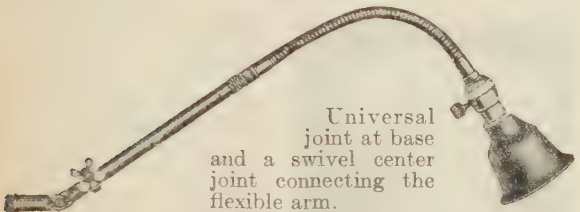
Length.....inches	9	12	15	18	21	24
Standard.....each	$1.20	1.30	1.40	1.50	1.60	1.70
Arm.....each	1.30	1.40	1.50	1.60	1.70	1.80

No. 250 add prices of standard and arm in sizes ordered.

No. 16 Steel Shade.....$.70 ⅜ Factory Socket..... $.60
No. 18 Porcelain Shade..1.00 Approved Wiring..... .40

No. 244 Tafco Adjustable Lighting Brackets

Black Finish



Universal joint at base and a swivel center joint connecting the flexible arm.

Has ½-inch I.P. male connection to condulet.
Standard package, 12; assorted, if desired.

Price, No. 244E, 18-Inch Bracket Only.....each **$2.70**
Price, No. 244F, 21-Inch Bracket Only.....each **2.80**
Price, No. 244G, 24-Inch Bracket Only.....each **2.90**
Price, No. 244H, 30-Inch Bracket Only.....each **3.10**

No. 16 Steel Shade.....$.70 ⅜ Factory Socket.... .60
No. 18 Porcelain Shade..1.00 Approved Wiring..... .40

Tafco Adjustable Lighting Brackets

Three sets of universal joints for adjustment.
Standard package, 12. Can be assorted if desired.

No.	Description	Lgth. to Socket Inches	Price, Each: Black Finish	Brush Brass	Nickel-Plated	Statuary Bronze
262	Bracket Only.....	24	$4.00	$6.00	$6.00	$6.60
263	Bracket Only.....	36	4.40	6.60	6.60	7.20
264	Bracket Only.....	48	4.80	7.20	7.20	7.80
For Socket Shade and Wiring..add			1.60	1.80	2.00	2.00
With Clamp Instead of Flange..add			.60	1.00	1.00	1.00

Special sizes to order. Prices in proportion.

Tafco Adjustable Ceiling Fixtures

Universal joint at top allows free action in any direction. Telescopic slide arm enables adjustment in length as required. Universal joint next to socket permits angulation of reflector. Complete with socket, shade and wiring.

Size indicated is the length from ceiling to the joint just above the socket.

Standard package, 12. Can be assorted.

No.	Extended Length Feet	Minimum Length Inches	Price, Each Black Finish
105	5	45	$8.00
106	6	54	8.00
107	7	64	8.00
108	8	76	8.50
109	9	88	9.00
110	10	100	9.50

For Brass or nickel finish add $2.50 each.

Buss Lights

With Metal Shades

Buss Lights provide useful light to read, sew, study, or work by, because the lights have a neck that bends and a shade that tilts, to throw the light just where it is wanted. Can be quickly clamped anywhere by a screw clamp that holds securely on anything square or round up to 2½ inches thick. In addition, they can be hung by a slot in the base on a hook or screw. The light hugs the wall like a permanent fixture. Each Buss Light is equipped with a 9-foot cord.

Decorated All Metal Models

The tall, slender base and deep shade make this a useful and handsome desk lamp with all the regular Buss clamping, hanging and adjusting features.

Height, 14 inches.

Furnished in two finishes, statuary bronze or pastel green, with gold banding on base and shade.

No. 4262 Statuary Bronze.each **$3.25**
No. 4363 Pastel Green.....each **3.25**

Plain All Metal Models

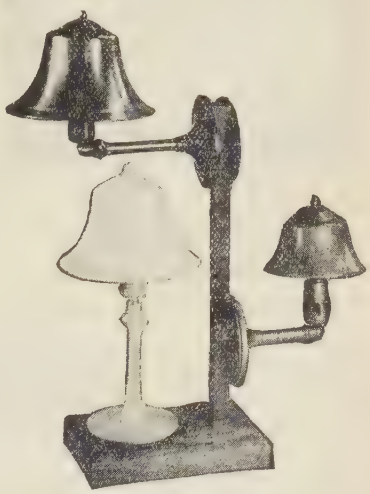
A utility model for workbench or garage, or for use as a bed lamp or just a handy lamp to carry around.

Height, 12 inches.

Furnished in two finishes, bronze lacquer or pastel green lacquer.

No. 2412 Bronze.....each **$2.35**
No. 2514 Pastel Green.....each **2.35**

Buss Light Demonstrating Stand



Holds three lights as illustrated, showing the clamping, hanging and adjusting features of the Buss light. Made of solid walnut. Takes only 6x9 inches of counter space. Given free on request with a dozen light order to dealers who do not already have a stand.

P & S Alabax Porcelain Lighting Fixtures

A modern and attractive bracket.
Complete with fittings to mount on switch boxes, or larger outlet boxes, where plaster ring with small opening is used.
Length of back, 5 3/16 inches.
Width of back, 2 7/8 inches.

With Convenience Outlet

Cat. No.	Per 100	Description	Std. Pkg.
AL-3104	$232.50	Pull	12
AL-3106	202.50	Keyless	12

Without Convenience Outlet

AL-3105	$202.50	Pull	12
AL-3107	172.50	Keyless	12

Add $60.00 per 100 for black, light green, ivory, orchid or sea green glazes.
Prices do not include lamps.

P & S Alabax Porcelain Lighting Fixtures

A bracket to cover almost any box used on side walls.
Completely wired unless otherwise specified.
Length of back, 5 1/4 inches.
Width of back, 4 3/8 inches.

With Convenience Outlet

Cat. No.	Per 100	Desc.	Std. Pkg.	Pkg. Wt. Lbs.
AL-2230	$232.50	Pull	12	150
AL-2232	202.50	Keyless	12	140

Without Convenience Outlet

AL-2231	$202.50	Pull	12	140
AL-2233	172.50	Keyless	12	130

Add $60.00 per 100 for black, ivory, sea green, light green, or orchid glazes.
Prices do not include lamps.

P & S Alabax Porcelain Lighting Fixtures

This is a general purpose bracket to fit over any box conditions. It is dignified and sturdy in appearance and service.
Complete with fittings to attach to studs.
Diameter base, 5 3/8 inches.

With 2 1/4-Inch Shadeholder

Cat. No.	Per 100	Description	Std. Pkg.
AL-980	$210.00	Keyless, with Convenience Outlet	12
AL-984	180.00	Keyless, without Convenience Outlet	12
AL-990	240.00	Pull, with Convenience Outlet	12
AL-982	210.00	Pull, without Convenience Outlet	12

With Plain Porcelain Ring

AL-983	$200.00	Pull, without Convenience Outlet	12
AL-989	230.00	Pull, with Convenience Outlet	12

Add $60.00 per 100 for black, ivory, sea green, light green, or orchid glazes.
Prices do not include glass.

P & S Alabax Porcelain Lighting Fixtures

For office buildings, hotels, homes, etc. Generally used in closets, toilets, halls, etc.

Diameter base, 4 21/32 in.

With shadeholder groove ring.

Add $60.00 per 100 for black, ivory, light green, or orchid glazes.

Prices do not include lamps.

Cat. No.	Per 100	Description	Std. Pkg.
AL-848	$212.10	Pull, with Short Insulated Chain	24
AL-849	240.00	Pull, with Short Chain and Cord	12
AL-898	118.17	Keyless	24

P & S Alabax Porcelain Lighting Fixtures

The smooth glossy surface of this beam light is easily cleaned.

Complete with fittings to attach to all boxes.

Diameter base, 4 3/4 inches.

Cat. No.	Per 100	Desc.	Std. Pkg.
AL-2007ND	$166.65	Pull	12
AL-2011ND	136.35	Keyless	12

Add $60.00 per 100 for black, ivory, light green, or orchid glazes.

Prices do not include lamps.

P & S Alabax Porcelain Kitchen Units

This is a 4-inch fitter or kitchen unit of graceful design, complete with fittings to attach to any box.

Pull

Cat. No.	Per 100	Std. Pkg.	Pkg. Wt. Lbs.
AL-2019	$180.00	24	55

Keyless

With Chain Hole

AL-2020	$150.00	24	55

Without Chain Hole

AL-2022	$150.00	24	55

Add $60.00 per 100 for black, ivory, light green sea green, or orchid glazes.

Prices do not include glass.

P & S Alabax Porcelain Lighting Fixtures

Furnished in regular Alabax colors.

Prices include white opal glass.

Add $60.00 per 100 for black, ivory, sea green, light green or orchid glazes.

Takes lamps up to 150 watt.

Has 4-inch fitter.

Pull

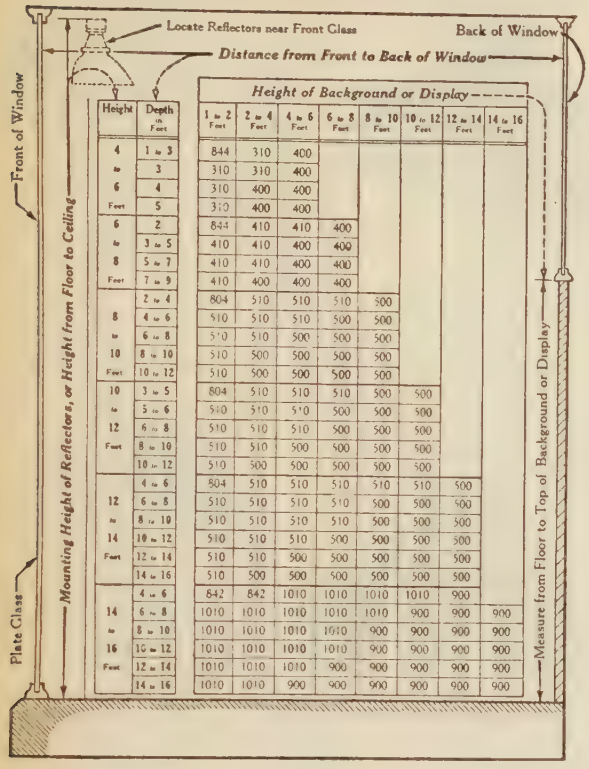
Cat. No.	Per 100	Std. Pkg.	Pkg. Wt., Lbs.
2240	$525.00	12	55

Keyless

2241	465.00	12	55

X-Ray Show Window Reflectors

Easy to Select the Correct X-Ray Reflector



Reflector No.	Size Lamp Watts	Reflector No.	Size Lamp Watts
310	100	**804**	200
400	150	**842**	500–300
410	150	**844**	150–100
500	200	**900**	500–300
510	200	**1010**	500–300

Think of the window to be lighted as though looking through the "end" of it. This will help to determine the three dimensions needed to select the proper reflector:

(1) The height above the floor at which the wiring for the reflectors will be mounted.

(2) Depth of window from front to back.

(3) Height of background or display.

Determine what reflector to use from the table above. First locate mounting height in the left column "Height." In the next column find the depth of window. Move along this line to the column under "height of background or display." That gives the height corresponding to that in the show window. The reflector designated in this space is the one to use. Example: For show window 9 feet high, 5 feet deep, with background 5 feet high, No. 510 Reflector should be used.

Spacing of Reflectors

The number of reflectors to use is influenced by the brightness of neighboring windows, the intensity of the street illumination, goods displayed, and color of the background, as well as the merchant's realization of the advertising and selling value of bright, well lighted windows. The closer reflectors are spaced, the brighter becomes the light in the window and vice-versa. In average installations spacing from center to center of reflectors is from 12 to 24 inches. In general, the following spacing is suggested:

Large cities, business district.....12 inches
Large cities, suburban district.....12 inches to 18 inches
Small cities.....12 inches to 18 inches
Towns.....15 inches to 24 inches

No. 53 Thrifty-Three Window Lighting Appliances

For Three 100-Watt Lamps

A lighting appliance that makes practical, effective show window lighting at low cost available for the small store.

Furnished with 3 No. 310 Favorite Reflectors, CurtiStrip wire channel with 3 lamp sockets and holders, a plug-in outlet to provide current for a floodlight or another Thrifty-Three, and 2 universal hangers. Complete with wire (either wired or unwired as required) and all parts needed, except lamps, ready for immediate use.

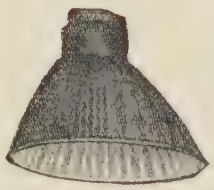
Length over all 39½ inches; length of CurtiStrip 36 inches; height from bottom of reflector to top of CurtiStrip channel 8⅛ inches.

Maximum suspension with 2 universal hangers is adjustable from 12 to 42 inches over all.

Packed one in carton; weight 16 pounds.
No. **53** Complete Unit, Wired.....each **$17.50**
No. **53**-UW Complete Unit, Unwired.....each **16.75**
Wire is included in the unwired fixture.

No. 310 Favorite X-Ray Show Window Reflectors

For 100-Watt Lamps



Designed for windows of the average small store.

Holder required is Form O 2¼ inches.

Diameter 7 inches; height of reflector only 5⅝ inches.

Standard package, 20 reflectors.

Weight, standard package, 26 pounds.
No. **310**.....each **$3.00**

No. 844 Comet X-Ray Show Window Reflectors

For 100 or *150-Watt Lamps

Designed for very shallow windows.

Holder required is Form A, 3¼ inches; No. 10300 for X-Ray or CurtiStrip Sockets; No. 10400 for brass shell sockets; No. 10500 for porcelain sockets.

*No. 10012 holder extension required for 150-watt lamp. Can be used only with No. 10300 holder on X-Ray or CurtiStrip sockets. Lamp should be inside frosted.

Diameter 8⅝ inches; height of reflector only 4⅜ inches.

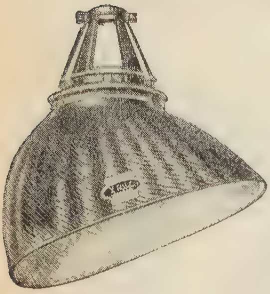
Standard package, 12 reflectors.

Weight of standard package, 19 pounds.

No. **844**.....each **$3.50**

X-Ray Show Window Reflectors

No. 400 Jack—*For 150-Watt Lamps
No. 500 King—For 200-Watt Lamps



Designed for average size deep windows.

Holder included is Form X.

Dimensions

No. **400** Width 8½ in.; depth front to back 8 in.; height including holder 8⅜ in.

No. **500** Width 10 in.; depth front to back 10½ in.; height including holder 10 in.

Prices

No.	400	500
Each	**$3.75**	**4.75**
Std. Pkg.	10	10
Wt. Std. Pkg. ....pounds	21	30

*If 100-watt lamp is used, ⅞-in. socket extension is required.

X-Ray Show Window Reflectors

No. 410 Jill—*For 150-Watt Lamps
No. 510 Queen—For 200-Watt Lamps

No. 410 is designed for average size shallow windows; No. 510 for average size narrow windows. Form X holder included.

Dimensions

No. **410**—Width 9⅜ in.; depth front to back 9½ in.; height including holder 8½ in.

No. **510**—Width 10½ in.; depth front to back 10¾ in.; height including holder 10¼ in.

No.	**410**	**510**
Each	**$3.75**	**4.75**
Std., Pkg.	10	10
Wt. Std. Pkg...lbs.	25	38

*For 100-watt lamp, use ⅞-in. socket extension.

No. 910 Leviathan X-Ray Show Window Reflectors

For 300 or 500-Watt Lamps

For large size narrow windows or high intensity Super-Lighting.

Holder and ½-inch socket with bushing for ⅜-in. pipe are included.

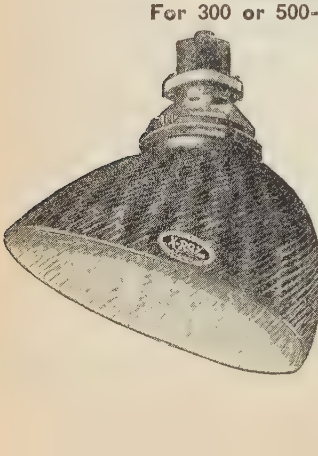
Width 13 in.; depth front to back 13 in.; height over all including holder and socket 14⅛ in.

Std. pkg., 4; weight std. pkg., 29 pounds.

No. **910**.....each **$9.75**

No. 900 Giant X-Ray Show Window Reflectors

For 300 or 500-Watt Lamps



Designed for large, deep windows or high intensity Super-Lighting.

Holder and ½-in. socket with bushing for ⅜-in. pipe are included.

Width 13 in.; depth front to back 13 in.; height over all including holder and socket 13¾ in.

Standard package, 4.

Weight standard package of 4 reflectors, holders and sockets, 26 pounds.

No. **900**......each **$9.75**

No. 7 Scoop Jr. X-Ray Show Window Reflectors

For 75, 60, 40 or 25-Watt Lamps

For small size deep windows and average deep display cases.

Holders required for various size lamps: 75 or 60-watt, Form H 2¼ inches; 40 or 25-watt, Form O 2¼ inches.

Width 5 inches; depth front to back 4⅞ inches; height of reflector only 3⅞ inches.

Standard package, 20 reflectors.

Weight, standard package, 11 pounds.

No. 7..each **$2.25**

No. 11 Hood Jr. X-Ray Show Window Reflectors

For 75, 60, 40 or 25-Watt Lamps

For small shallow windows and average wall display cases.

Holders required for various size lamps: 75 or 60-watt, Form H 2¼ inches; 40 or 25-watt, Form O 2¼ inches.

Width 5 inches; depth front to back 5⁷⁄₁₆ inches; height of reflector only 3½ inches.

Standard package, 20 reflectors.

Weight, standard package, 15 pounds.

No. **11**...each **$2.25**

No. 778 Scoop X-Ray Show Window Reflectors

For 100-Watt Lamps

Designed for small deep windows and large display cases.

Holder required is Form O 2¼ inches.

Width 7½ inches; depth front to back 7⅛ inches; height of reflector only 6⁵⁄₁₆ inches.

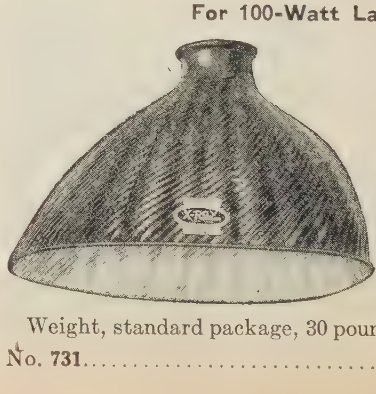
Standard package, 24 reflectors.

Weight, standard package, 37 pounds.

No. **778**.......................................each **$3.25**

No. 731 Hood X-Ray Show Window Reflectors

For 100-Watt Lamps



For small shallow windows and large display cases.

Holder required is Form H 2¼ inches.

Width 8⅞ inches; depth front to back 9 inches; height of reflector only 6½ inches.

Standard package, 16 reflectors.

Weight, standard package, 30 pounds.

No. **731**.......................................each **$4.00**

X-Ray Beehive Reflectors

This distributing type reflector gives a wide spread of light and hides the lamp. Adapted for illuminating factories, gymnasiums, etc. Clearest quality crystal glass with pure silver reflecting surface.

Nos. 585 and 54 are furnished with mogul socket and special holder.

Cat. No.	Each	Diam. In.	Height In.	Holder In.	Lamp Watts	Std. Pkg.	Wt. Lbs. Std. Pkg.
3	**$1.75**	4½	3$\frac{5}{16}$	2¼ H or O	75–25	20	12
535	**2.50**	5⅞	5	2¼ H or O	100–60	24	22
570	**3.50**	8	7	3¼ A	150	16	33
575	**4.25**	9⅜	8	3¼ A	200	8	24
585	**9.25**	11⅞	13½	Special	500–300	4	24
54	**27.50**	16½	21¾	Special	1500–750	2	50

X-Ray Direct Lighting Reflectors

This semi-concentrating reflector gives an intense concentration of light. The smaller sizes, Nos. 696 and 700 are used for bench lighting in factories; No. 710, where a higher intensity of light is required; No. 590 for gymnasiums, factories, armories and other high interiors.

No. 590 is furnished with mogul socket and special holder. All reflectors are made of clear quality crystal glass with pure silver-reflecting surface.

Cat. No.	Each	Diam. In.	Height In.	Holder In.	Lamp Watts	Std. Pkg.	Wt. Lbs. Std. Pkg.
696	**$3.00**	8⅜	5	2¼ H or O	100–60	24	30
700	**4.40**	10	5⅛	2¼ H	150	18	32
710	**5.50**	11½	6⅞	3¼ A	200	6	19
590	**27.50**	20	20	Special	1500–750	2	42

No. 515 Midget X-Ray Show Window Reflectors

For 25-Watt (T-10) Lamps

(Standard Medium Screw Base Tubular Lamp)

For use where space for mounting or concealing equipment is limited.

Special holder is included. This fits standard brass-shell socket.

Reflector only—width 2⅞ inches; height 1¾ inches, including lip 2⅛ inches; length 6¼ inches.

When installed with Scoopette miniature conduit fittings and standard electrolier angle sockets, maximum height or depth is 3⅝ inches; length of reflector and socket 8¾ inches.

Standard package 36 reflectors and holders; weight, standard package, 16 pounds.

No. **515**....................................each **$2.25**

No. 750 Poke Bonnet X-Ray Show Window Reflectors

For Two 60, 40 or 25-Watt Lamps

For low deep windows and display cases.

Special holder and twin socket with 18 inches of wire and plug is included.

Width 14 inches; depth front to back, including holder, 7 inches over all; maximum height from top of bracket to bottom of reflector 6⅛ inches over all.

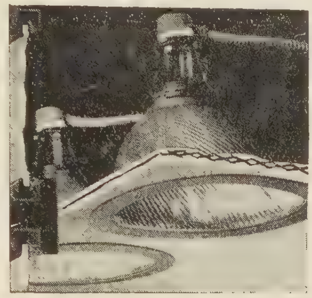
Standard package 8 reflectors, holders and twin sockets with cord and plug; weight, standard package, 26 pounds.

No. **750**....................................each **$13.00**

X-Ray Finishing Flanges and Plaster Rings

For Recessing X-Ray Reflectors above Ceiling of Window

Finishing Flanges



Recessing the reflectors and wiring above the ceiling gives the window a neat appearance. Light-weight cast flanges finish off the opening, support the reflector in correct position and reinforce plywood ceilings that would otherwise be weakened after openings are cut. Louvers and color-ray can be used the same as when equipment is supported from transom bar or ceiling. On newly plastered ceilings, use plaster rings described below. Flanges are supplied unfinished; may be painted to match window ceiling.

Standard package, 10.

Flange No.	For Reflector	Std. Pkg. Wt. Lbs.	Each
10394	No. 11 Hood Jr.	9	**$.50**
10594	No. 11 Hood Jr. with Louver	12	**2.50**
14310	No. 310 Favorite	3	**.55**
11400	No. 400 Jack	15	**.65**
11410*	No. 410 Jill	16	**.65**
11500	No. 500 King	22	**.85**
11510*	No. 510 Queen	24	**.85**
10329	Nos. 600 and 610	..	**1.20**
10349	No. 731 Hood	..	**1.00**
10417	Nos. 804 and 810	24	**1.60**
14004*	Nos. 842 and 848	26	**1.50**
10517	No. 844 Comet	16	**.80**
10432*	Nos. 900 and 910	26	**1.00**
14110*	No. 1010 Blimp	26	**1.25**

*Plaster ring available for use with this flange shown below.

Plaster Rings

Plaster rings, made of light-weight cast iron, are used where reflectors are to be recessed above plaster ceilings. They serve as a ground to plaster to, as a base for securely mounting ceiling finishing flanges, and make the ceiling rigid by reinforcing the lathing around the opening.

Plaster rings are installed by the lathing contractor. Plastering contractor places final coat of plaster flush with the bottom of the Plaster Ring. Finishing flanges support the reflector in the proper position and finish off the opening in the ceiling. Lugs on sides are placed off-center to allow for close spacing between reflectors.

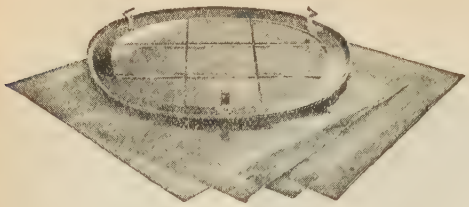
Plaster rings are also available for hinged rims and general lighting reflectors.

Plaster rings should be ordered early, even before reflector equipment, so that they will be on the job ready for use when lathing is being done.

Standard package, 10.

No.	For Reflector	Finishing Flange No.	Std. Pkg. Wt. Lbs.	Each
14006	No. 410 Jill	11410	20	**$1.10**
14007	No. 510 Queen	11510	24	**1.50**
14008	No. 900 Giant or No. 910 Leviathan	10432	26	**1.80**
14111	Nos. 842, 848 and 1010	14004, 14110	26	**2.00**

X-Ray Color-Rays



Color-Ray is an accessory for producing color lighting effects with standard X-Ray Window Reflectors. It consists of a simple metal frame with 4 sheets of colored gelatin (red, blue, green and amber); clips securely on the reflector; very easy to install or to change colors.

Standard package, 10.

Cat. No.	For Use with Reflector	Wt. Lbs. Std. Pkg.	Each
440	No. 400 Jack	7	$1.75
441	No. 410 Jill	7	1.75
55	Nos. 500 and 510	7	2.35
99	Nos. 900 and 910	7	2.75
10870	No. 1010 Blimp	7	3.50

Color Gelatin Sheets

Size 11½x11½ Inches

For Nos. 440 and 441, also 33-A, 303-A and 338.

Cat. No.	Color	Each
10372	Red	$.15
10373	Amber	.15
10374	Green	.15
10375	Blue	.15

Size 15x15 Inches

For Nos. 55, 99 and 10870, also Nos. 88, 808 and 888.

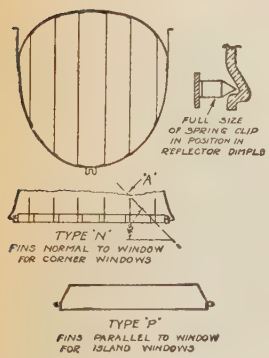
Cat. No.	Color	Each
10472	Red	$.20
10473	Amber	.20
10474	Green	.20
10475	Blue	.20

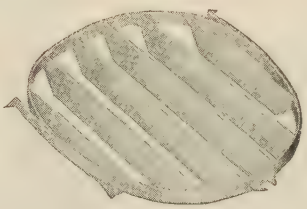
Standard package; 10 sheets one color or assorted.

Weight, standard package, approximately, one pound.

X-Ray Louvers

For Concealing Light Source from View





Corner or island type windows often require a means of concealing the lamps and light from reflectors along the adjacent side. Louvers can be installed at any time in dimpled X-Ray Reflectors.

Hinged sections of continuous louvers available on order.

Each louver is a complete unit; finish, gray.

Standard package, 1.

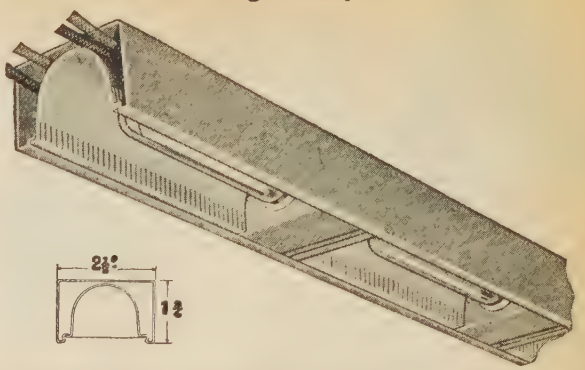
Type N Louvers, Fins at Right Angles to Glass

Cat. No.	For Use with Reflector	Wt. Lbs. Each	Each
12400-N	No. 400 Jack	1	$3.00
12410-N	No. 410 Jill	1	3.00
12500-N	No. 500 King	1	3.00
12510-N	No. 510 Queen	1	3.00
12900-N	No. 900 Giant	2	3.75
12910-N	No. 910 Leviathan	2	3.75
12110-N	No. 1010 Blimp	2	4.00

Type P Louvers, Fins Parallel to Glass

12410-P	No. 410 Jill	1	$3.00
12510-P	No. 510 Queen	1	3.00
12910-P	No. 910 Leviathan	2	3.75
12110-P	No. 1010 Blimp	2	4.00

LightStrip



LightStrip is a standardized lighting channel and can be made to any length with outlets spaced as required on the job. It is made with CurtiStrip and LightStrip unit assemblies in 3 sizes from 25 to 150 watts capacity.

Each section of LightStrip requires the same total length of No. 1 CurtiStrip also 2 No. 6 end caps and No. 16 couplings to connect short pieces of CurtiStrip or pieces over 10 feet long. It may be a short 1-light section or a longer section with many lights. It is wired on the bench, is easily installed and quickly connected to the lighting circuit like a fixture. It has ample capacity for carrying wires. The same methods of support used for CurtiStrip are used for mounting LightStrip. All CurtiStrip fittings and plug-in receptacles are standard for LightStrip.

Reflectors are bright aluminum finish; other metal parts are cadmium-plated.

For 25-Watt T-6½ Intermediate Base Tubular Lamps

No. 26 Unit Assembly

No. 26 assembly includes bright aluminum reflector and intermediate base socket unit. Minimum spacing between units 8 inches on centers. Cover spacers are cut 8 inches less than actual center to center spacing between units.

Standard package of 10 sets weighs 4½ pounds.

No. 26 Assembly.....per set $1.35

For 25 to 150-Watt Medium Screw Base Tubular Lamps

These assemblies include bright aluminum reflector with spring clip to hold lamp and medium screw base tilting socket. Socket tilts out for inserting or removing lamp.

No. 27 Unit Assembly

For 25-watt T-10 medium screw base lamps. Minimum spacing between units 9 inches on centers. Cover spacers are 8⅝ inches less than actual center to center spacing.

Standard package of 10 sets weighs 5¾ pounds.

No. 27 Assembly.....per set $1.55

No. 28 Unit Assembly

For 40-watt T-8, 75 or 150-watt T-10 medium screw base tubular lamps. Minimum spacing between units 15 inches on centers. Cover spacers are cut 14⅜ inches less than actual center to center spacing.

Standard package of 10 sets weighs 7 pounds.

No. 28 Assembly.....per set $1.75

Wattage Required with LightStrip

The same total wattage will generally be used with LightStrip as would normally be employed.

Panel Lighting: For even lighting on flashed opal glass panels, the light source must be kept at proper distance from glass.

For narrow panels distance from front of LightStrip to glass must not be less than panel width.

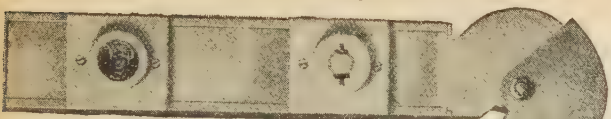
For wide panels where several rows of LightStrip are used, distance between rows must not exceed distance from front of LightStrip to glass.

Where No. 27 or 28 are used behind glass panels, allow ½ inch of space between top of CurtiStrip and underside of glass.

For room illumination from panels 4 watts per square foot of floor area will generally give approximately 6 to 8 foot candles.

Color Lighting Effects: Wattage and spacing should be the same as for white lighting.

CurtiStrip



CurtiStrip is a simplified wiring channel and race-way. Standardized fittings permit almost any assembly. The patented snap-in flat cover permits outlets to be placed on any spacing. The cover, placed between sockets or fittings, is cut to length required with tinners' shears and snaps firmly in place in the lip of the channel. Channel is cut to any length with a hack saw. Sections longer than 10 feet are coupled together with No. 16 coupling.

Channel and cover are made of No. 20 U. S. gauge cold rolled steel cadmium plated, a process that presents an attractive finish and protects the metal. This surface may be painted on the job, or it can be brushed and lacquered where a satin silver finish is wanted.

CurtiStrip Channel

CurtiStrip Channel is made in only one size 2½ inches wide, 1⅝ inches deep. The wire way is large enough to carry as many as 30 No. 14 rubber covered wires under sockets, local inspection permitting. This is important where many circuits or a long run of outlets would otherwise make it necessary to put in additional risers at several points.

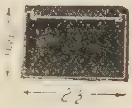
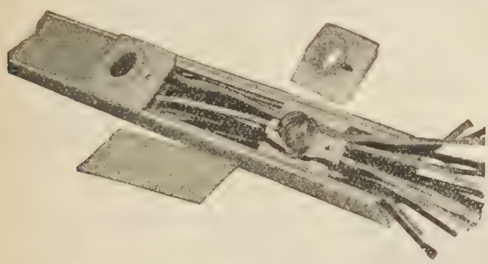


Illustration below shows one spacer and socket cover removed from a section of CurtiStrip, giving a clear idea of how wires are laid under terminal screws of CurtiStrip sockets and the large wire carrying capacity.

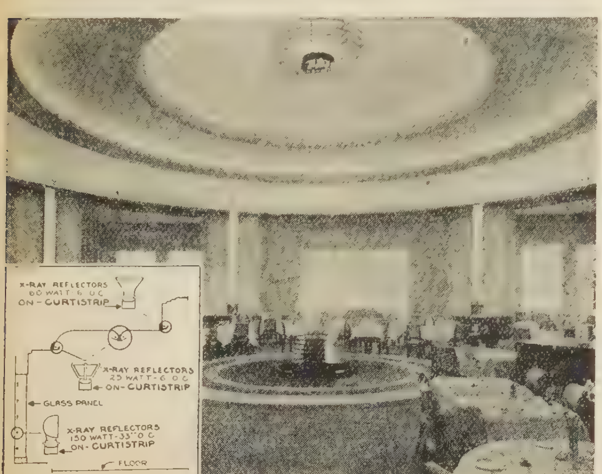


Standard package is 100 feet of ten 10-foot lengths.

No. 1 Channel with Cover.................... per foot $.50
Weight, standard package, 130 pounds.

No. 1-A Channel without Cover.............. per foot .45
Weight, standard package, 103 pounds.

No. 1-B Cover Only for No. 1-A Channel...... per foot .10
Weight, standard package, 40 pounds.



Recessed and Cove Lighting

CurtiStrip Sockets and Receptacles

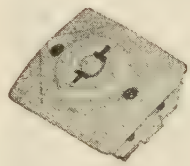
Sockets and receptacles can be spaced as close as 2¾ inches on centers. Their 2-piece construction saves time and simplifies wiring.

Cover spacers are cut 2¼ inches shorter than the center to center measurements between outlets.

Example: Outlets on 18-inch centers have 15¾-inch spacers.

Wires are not cut but stripped and laid under terminal screws along groove. Porcelain top completely covers bare wire. Not necessary to compound terminals.

No. 4 Plug-In Porcelain Receptacles



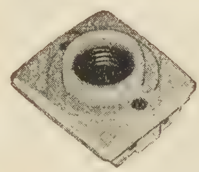
Polarized receptacle—15 amperes 125 volts, 10 amperes 250 volts dead front.

Height over all in CurtiStrip 2¼ inches.

Standard package of 10 weighs 7 pounds.

No. 4....................... each $.65

No. 5 Standard Porcelain Sockets



Standard porcelain socket with shade holder groove for use with X-Ray reflectors having Form X Holders and for all other standard shade holders used on porcelain sockets.

Height over all in CurtiStrip 2 7/16 inches.

Standard package of 50 weighs 27 pounds.

No. 5....................................... each $.55

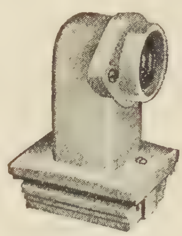
No. 5-A Special Porcelain Sockets

Special porcelain socket, no shade holder groove, for use with X-Ray holders and cove lighting reflectors.

Height over all in CurtiStrip 2 7/16 inches.

Standard package of 50 weighs 27 pounds.

No. 5-A...................................... each $.55



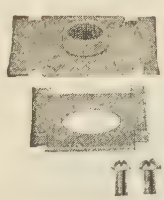
No. 8 Porcelain Angle Sockets

Porcelain angle socket for X-Ray cove lighting reflectors.

Height over all in CurtiStrip 5¼ inches. Top of CurtiStrip to center of socket 2¾ inches.

Standard package of 50 weighs 47 pounds.

No. 8........................ each $1.30



No. 19 Nipple Attachments

Nipple attachment, ⅜-inch female thread, for supporting reflectors on nipple or for use with X-Ray cove lighting reflectors.

Standard package of 10 weighs 3 pounds.

No. 19....................... each $.45

No. 19-BX Attachments

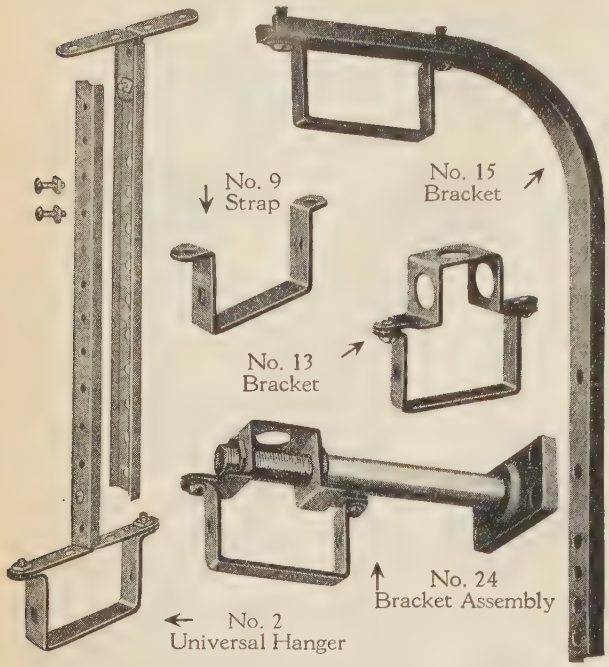
Attachment designed to connect ½-inch BX to CurtiStrip or for attaching ½-inch socket to CurtiStrip by using chase nipple.

Standard package of 10 weighs 3 pounds.

No. 19-BX.................... each $.35

CurtiStrip Supports

Standard Finish, Cadmium Plated



Five standard X-Raylets (CurtiStrip fittings) offer complete flexibility for mounting CurtiStrip. To bolt against any flat surface use No. 9 strap. To hang down from beam or ceiling use No. 2 hanger. This is adjustable from 4 to 34 inches over all, where a chain or rigid rod hanger is to be used, the No. 13 bracket should be substituted.

No. 2 Universal Hangers

This hanger can be made any length from 4 to 34 inches. Includes 2-piece perforated hanger, one No. 9 strap, 4 angle brackets and 6 bolts.

Standard package of 10 weighs 16 pounds.

No. **2** ..... each **$1.05**

No. 9 Straps

For holding CurtiStrip against any flat surface.

Spread over all 3 15/16 inches. Holes on 3 5/16-inch centers. Standard package of 10 weighs 2 pounds.

No. **9** ..... each **$.10**

No. 13 Brackets

Designed to hang CurtiStrip on pipe or chain hanger, pipe or chain not included.

Height top to bottom 3 inches.

Standard package of 10 weighs 4 pounds.

No. **13** ..... each **$.30**

No. 15 Hangers

For mounting CurtiStrip on wall or transom bar. May be used as shown or reversed.

With long leg of bracket at wall the distance from wall to center of CurtiStrip is 5 inches. Height of bracket may be varied from 12 1/8 to 8 1/4 inches or less by drilling new holes. With short leg of bracket at wall, distance from wall to center of CurtiStrip may be varied from 8 1/4 to 10 1/8 inches, height varying from 5 to 7 inches.

Standard package of 10 weighs 11 pounds.

No. **15**, Includes No. 9 Strap ..... each **$.65**

No. 24 Bracket Assembly

For mounting CurtiStrip out from transom bar or for suspending from ceiling. Includes 1 1/2x3-inch rectangular flange, 3/8-inch nipple 6 1/4 inches long with 2 locknuts and No. 13 brackets.

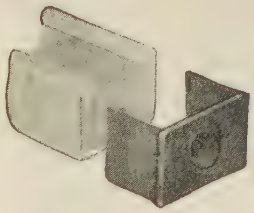
Standard package of 10 weighs 9 pounds.

No. **24** ..... each **$.80**

CurtiStrip Fittings

Standard Finish, Cadmium Plated

No. 6 End Caps

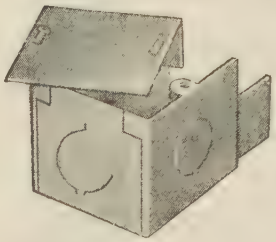


Designed to close and finish end of CurtiStrip. Provided with 1/2-inch knockout (can be reamed to 3/4 inch) for lead-in circuits.

Standard package of 10 weighs 3 pounds.

No. **6** ..... each **$.35**

No. 12 Service Boxes



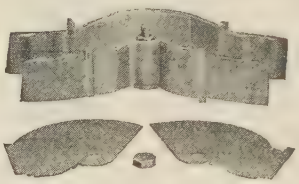
Designed for use where conduit larger than 3/4 inch is necessary.

Has four 3/4-inch knockouts bottom, end and 2 sides, that may be reamed up to 1 1/2 inches. Size extending outside of CurtiStrip 2 3/4x2 3/4x2 3/4 inches.

Standard package of 10 weighs 12 pounds.

No. **12** ..... each **$1.70**

No. 14 Elbows

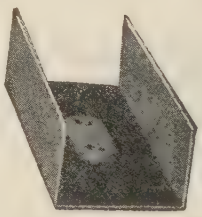


Elbow is adjustable from 70 to 180 degrees. Cover is removable and eliminates fishing of wires. Separable body permits using elbow as splice box.

Standard package of one weighs 3 pounds.

No. **14** ..... each **$1.90**

No. 16 Couplings



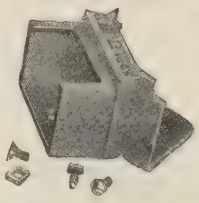
This coupling is used for connecting 2 pieces of CurtiStrip.

Does not reduce size of wireway or interfere with use of other CurtiStrip sockets and receptacles.

Standard package of 10 weighs 5 pounds.

No. **16** ..... each **$.45**

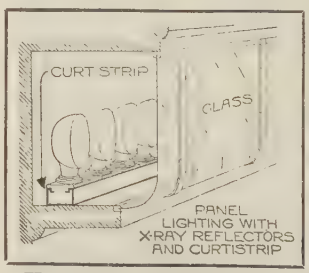
No. 18 Box Adapters



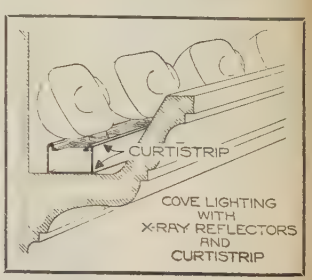
For connecting CurtiStrip to 4-inch standard octagonal outlet box. 1, 2, 3 or 4 adapters may be used so that CurtiStrip may be run in as many different ways from one outlet box.

Standard package of 10 weighs 6 pounds.

No. **18** ..... each **$.65**



X-Ray cove lighting reflectors may be mounted on No. 5-A Socket and entire length of CurtiStrip tilted to secure correct distribution of light.



Reflectors mounted on No. 8 Socket or No. 19 Nipple Attachments are adjusted individually.

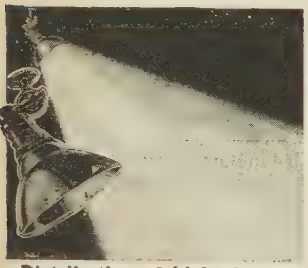
CurtiStrip is generally fastened with No. 9 Strap.

X-Ray Interior Floodlights

Three Types of Light-Control

Three general types of light-control are provided with X-ray interior floodlights. The illustrations below give an idea of the distribution from each unit. These three types are briefly described as follows:

Center Spot Beam



Distribution of Light from Nos. 44, 33-A or 88 Showing Flood of Light and Center Spot Beam

This combination of a flood and spotlight has a wide range of uses because of its intense concentration and wide general illumination. Small shop windows can be completely lighted with one or two of this type of unit so that the principal portions of the display are highlighted. At the same time there is sufficient light provided for the rest of the display.

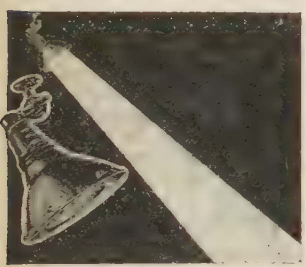
On Short Swivel Base

Cat No.	Std. Lamp Watts
44	150–100
*33-A	200
33-B	200
*88	500–300
88-B	500–300

On Portable Stand 54″ High

Cat No.	Std. Lamp Watts
*303-A	200
303-B	200
*808	500–300
808-B	500–300

Spot Beam



Nos. 33-A or 88 with Control Ring to Conceal Lamp Produces Powerful Spot Beam

Where the general flood of light is not wanted but instead more of a spotlight effect is needed the Spot Beam should be used. A control-ring is used with the regular Type 33-A or 88 to confine all of the light into one powerful spot beam. This combination is generally used in store interiors for spotlight sales and wherever the light source should be concealed.

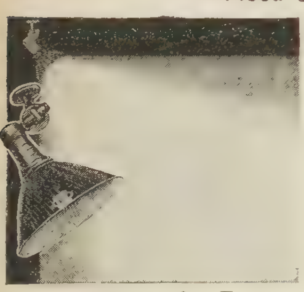
On Short Swivel Base

Cat. No.	Control Ring No.	Std. Lamp Watts
*33-A	13351	200
33-B	13351	200
*88	18860	500–300
88-B	18860	500–300

On 54″ Portable Stand

Cat. No.	Control Ring. No.	Std. Lamp Watts
*303-A	13351	200
303-B	13351	200
*808	18860	500
808-B	18860	500–300

Flood of Light



Nos. 338 and 888 Type Floodlights provide a Wide Flood of Light

This distribution is readily understood. In X-Ray interior floodlights the overall spread is approximately 100° with the greatest concentration of light in the 40° zone.

The two sizes of this type of unit have a wide variety of uses.

On Short Swivel Base

Cat. No.	Std. Lamp Watts
*338	200
338-B	200
*888	500–300
888-B	500–300

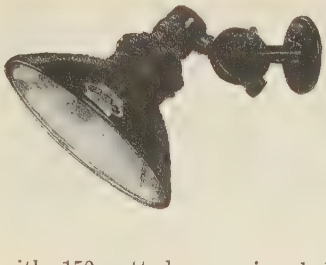
On Portable Stand 54″ High

Nos. 338, 338-B, 888 and 888-B can be supplied on portable stand 54 inches high by so specifying.

*Regularly supplied with Color-Frame and red, blue, green and amber gelatin for color highlighting. All others have no color equipment and are for white lighting only.

No. 44 X-Ray Interior Floodlights

For 150 or 100-Watt Lamps



Concentrating type for white lighting only; no color equipment available. This is a combination of spot and floodlight. Base has universal adjustment.

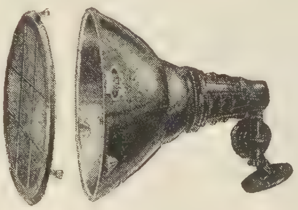
Diameter of reflector 8⅝ inches. Depth from back of socket to front of reflector 7 inches with 100-watt lamp, 7½ inches with 150-watt lamp using holder extension (included). Diameter of base 3¼ inches.

Standard package containing one unit weighs 5 pounds.

No. **44** .... each **$7.00**

No. 33-A X-Ray Interior Floodlights

For 200-Watt Lamps



Concentrating type for white or colored lighting. For smooth soft edge beam use inside frosted lamps. Base has universal adjustment. Color equipment consists of 4 pieces of gelatin (red, blue, green and amber) frame and clips.

Diameter of reflector 10½ inches. Depth back of socket to front of reflector 10¾ inches. Diameter of base 3¼ inches.

No. **33-A** with Color Equipment, wt., 7 lbs...... each **$9.50**
No. **33-B** without Color Equipment............. each **7.75**
No. **303-A** Portable with Colors, wt., 31 lbs..... each **21.00**
No. **303-B** Portable without Colors............. each **19.25**

Portables have 54-in. stand and 10-ft. cord with plug.

No. 88 X-Ray Interior Floodlights

For 500 or 300-Watt Lamps

Concentrating type for white or colored lighting. Base has universal adjustment. Diameter of reflector 13¼ in. Depth from back of socket to front of reflector 11⅛ in. Diameter of base 3¼ in. Color equipment consists of 4 pieces of gelatin (red, blue, green and amber) frame and clips.

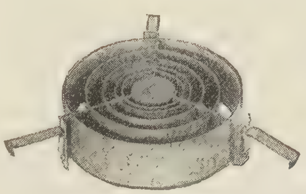
No. **88** with Color Equipment................. each **$16.50**
No. **88-B** without Color Equipment............ each **13.75**
No. **808** Portable with Colors.................. each **28.00**
No. **808-B** Portable without Colors............ each **25.25**

Weight, No. 88, 12 lbs., No. 808, 30 lbs.

Portables have 54-in. stand and 10-ft. cord with plug.

X-Ray Control-Rings

For Interior Floodlights



A louver for converting regular interior floodlights into commercial spotlights. Consists of a circular spill shield for eliminating the spill of light common to all floodlights and confining all the light to one straight controlled beam.

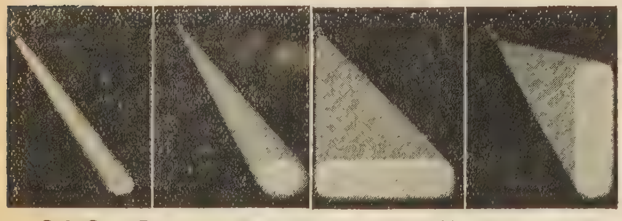
Control-ring is used only with concentrating types and is available only for 200 and 500–300 watt sizes listed below. Attached by snapping spring-clips over the lip of the floodlight reflector. Does not interfere with the use of color-ray and can be used with reflectors when recessed.

Standard package, 1; shipping weight, 1 pound.

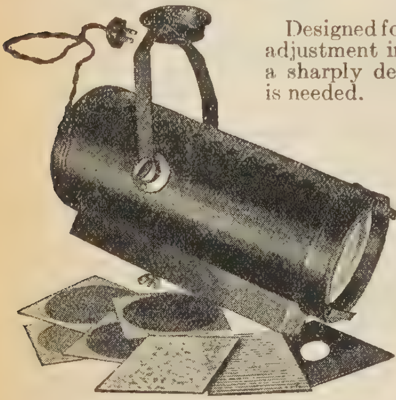
No. **13351** for Nos. 33-A, B and 303-A, B........ each **$3.50**
No. **18860** for Nos. 88, 88-B, 808 and 808-B...... each **4.50**

No. 315 X-Ray Spotlights

For 250-Watt G-30 Lamp



Soft Spot Beam 8° to 30° — **Both Horizontal and Vertical Beam Adjustable from 6° by 30° up to 24° to 50°**



Designed for spotlighting where adjustment in the size of spot or a sharply defined beam of light is needed.

Length over all 15⅝ inches; yoke 7⅝ inches; diameter barrel 5¾ inches; lens 4½ inches.

Black enamel finish. Wired with 6 feet of No. 16 wire and separable plug. Slides provide color lighting and special effects shown above.

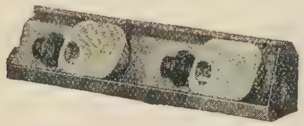
Each spotlight has 4 color frames, red, blue, green and amber, one metal and 2 glass slides for producing smaller sharp spot beam, soft spot and rectangular vertical or horizontal beam of light. At 10 feet this is adjustable 16 to 60 in.

Standard package containing one unit weighs 8 pounds.

No. **315** Spotlight..............................each **$22.50**
Lens Only for No. 315..........................each **4.50**

X-Ray Portable Footlights

150-100*-Watt Lamps on 12-Inch Centers



Designed for show windows, small stages and wherever a standardized or portable footlight is needed.

Footlights used alone or in combination with regular reflector equipment light the display brightly from below, eliminating shadows so often objectionable in overhead lighting.

This type of footlight is also widely used in schools, lodge rooms, clubs, style shows, conventions and expositions, police show-up rooms, museums, art galleries, etc.

Sturdily constructed of heavy gauge steel with inside finished aluminum bronze. X-Ray reflectors on 12-inch centers. Height over all 5⅝ inches. Depth from front to back 5½ inches. Provided in 2 standard lengths, 4 and 8 feet, but can be made to any length. Furnished unwired (without wire) and unassembled. Removable wireway cover makes wiring easy.

Standard finish, statuary bronze lacquer enamel.

Standard package is one section. Average shipping weight per foot on sections 4 feet long or more is 4½ pounds.

No. **10584** Section 4 Feet Long for 4 Lamps.....each **$38.00**
No. **10588** Section 8 Feet Long for 8 Lamps.....each **75.00**
No. **10589** (Use this number for other lengths)

On Orders up to 8 Feet...................per foot **11.25**

On Orders for More than 8 Feet..........per foot **10.75**

Specify length required.

*With 100-watt lamps use short (⅞-inch) socket extension.

X-Ray Scoopette and Hoodette Reflectors

For 50-Watt (A-19 or P-19), 25-Watt (A-19) or 15-Watt (A-17) Lamps

Scoopettes and Hoodettes are miniature show window reflectors and are recommended for lighting display cases. Lamps burn in the natural position, base up. Provide a bright light without glare and of uniform intensity. Supplied in complete showcase lighting outfits or as separate reflector units, medium screw base sockets, for mounting on standard ⅜-inch brass pipe, ⅛-inch iron pipe size with standard thread.

No. S-200 Scoopettes

Designed for lighting show cases with inside height and depth approximately equal.

Width 4 inches. Depth from front to back 3⅝ inches. Height over all 4½ inches.

Standard package, 10.

Weight, standard package, 7 pounds.

No. S-**200** Unit............each **$5.00**

No. H-199 Hoodettes

Designed for lighting wall cases with height approximately 2 to 3 times depth.

Width 3¾ inches. Depth from front to back 5⅜ inches. Height over all 4½ inches.

Standard package 10.

Weight, standard package, 9 pounds.

No. H-**199** Unit.......each **$5.00**

Complete Outfits

Scoopette or Hoodette Outfits are supplied complete with all fittings necessary to install in either wood frame or all-glass display cases. No switch box, switch, switch plate or lamps. Prices given in table below are for show cases with square ends. Add $2.50 for case with one round end, $3.25 for two round ends. Material regularly supplied unwired and unassembled. Add 20% for wiring and assembling.

Standard package, 1 complete outfit.

Length Case Outside	No. Scoopettes or Hoodettes per Case					
	2	3	4	5	6	7
4′ to 6′	**$20.75**	**$26.75**	**$33.25**	.....	.....	.....
6′1″ to 8′	.....	**28.00**	**34.00**	**$40.50**	**$46.75**	.....
8′1″ to 10′	.....	.....	.....	**41.00**	**47.75**	**$54.25**

Prices on complete lighting equipment for cases longer than 10 feet supplied on request.

When ordering complete outfits, specify all-glass or wood frame and give the following dimensions:

Inside length from glass to glass or wood frame to wood frame.

Distance from under side of top glass to under side of floor of case.

If cases are not of regular square end type, send a rough sketch giving dimensions and radius of the end curve.

Display Case Lighting with X-Ray Reflectors

Many types of display cases can be lighted with X-Ray Reflector equipment.

Light Strip can be used for lighting stock and display racks in clothing stores increasing their value as display cases and making easier the selection of pattern or style.

Cabinets can be lighted effectively with Scoop Jr. and Hood Jr. reflectors.

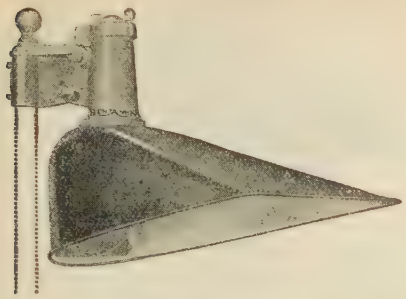
Corridors, passages and lobbies correspond in value to street frontage for window displays. Their effectiveness is increased by lighting with the smaller sizes of X-Ray window reflectors.

Display cases of silver and polished metals are attractively lighted with Hood Jr. reflector and recesses. Clear or daylight lamps or a combination of both, may be used.

Footlighting with X-Ray Portable Footlights or Light Strip or X-Ray reflector mounted below panels of diffusing glass is used in display case lighting. This arrangement permits having cases with lower head room and raising the platform to a more interesting height.

Benjamin Duo-Service Floodlights

N. E. C. Standard
For 750, 1000 and 1500-Watt Lamps



For lighting gasoline service stations, used car lots, etc.

Combines a wide coverage diffusing reflector with an intensive beam floodlighting projector. Provides uniform illumination of a surrounding area with simultaneous high intensity floodlighting of an upright or flat surface within, close to, or at some distance from area of general illumination. This high intensity floodlighting beam can be concentrated or spread by a simple screw adjustment.

Installed by slipping bracket arm over 1½-inch pipe.

Porcelain enameled steel reflector, green outside, white inside. Chromium or aluminum oxide metal projector and heavy cast aluminum hood includes a porcelain mogul base socket. All metal fittings not cast aluminum are cadmium-plated.

No. 5763, with Chromium Concentrating Beam Inner Projector	each	$34.00
No. 5763A, Same as No. 5763, but Fits 2" I.P.	each	34.00
No. 5764, with Ox. Alum. Spread Beam Inner Projector	each	31.00
No. 5764A, Same as No. 5764, but Fits 2" I.P.	each	31.00
No. 5765, without Projector	each	28.00
No. 5765A, Same as No. 5765, but Fits 2" I.P.	each	28.00
No. 5766, with Oxidized Aluminum (Wide Spread Beam) Inner Projector (Larger Than No. 5764)	each	32.50
No. 5766A, Same as No. 5766, but Fits 2" I.P.	each	32.50

Benjamin Play-Area Floodlights

For 750, 1000 and 1500-Watt Lamps

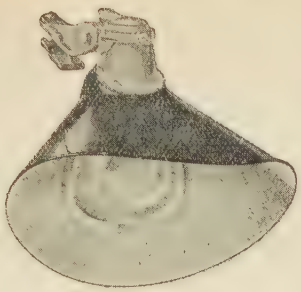
An open type, wide angle, diffusing floodlight designed for lighting outdoor recreational areas such as football and athletic fields, race tracks, etc. Provides uniform, strong illumination on the ground area to the front and sides and improves upper area illumination.

A wide range of adjustment, both horizontally and vertically, is provided by the rugged mounting bracket. A positive clamping mechanism locks the fixture at any desired position through this range.

Porcelain enameled reflector, green outside, white inside; inner reflector is non-corrosive aluminum oxide; all metal parts are cast aluminum or cadmium-plated.

No. 5752, Fits Over 1½-Inch I.P.	each	$31.00
No. 5752A, Fits Over 2-Inch I.P.	each	31.00
No. 5753 (Less Inner Reflector), Fits Over 1½-Inch I.P.	each	28.00
No. 5753A (Less Inner Reflector), Fits Over 2-Inch I.P.	each	28.00
No. 5754, with Universal Mounting Bracket and Pipe Clamp	each	29.00
No. 5755, with Universal Mounting Bracket, Less Inner Projector	each	26.00

Benjamin Open-Type Floodlights



A wide angle, open type diffusing floodlight. For floodlighting the smaller type of recreation area, playground, parking lot, gasoline station, etc.

Hoods are made in 3 types: pendent for attaching directly to a threaded pipe, or with universal mounting bracket for fastening to flat surfaces or, by means of the pipe clamp supplied with the bracket, to 1 and 1½-inch pipe or with bracket arm to slip over 1½-inch pipe.

A wide range of adjustment vertically is provided by the universal mounting bracket hood, while both hoods provide complete adjustability of the reflector horizontally. Floodlight is durably constructed for outdoor service and is entirely weatherproof throughout.

The porcelain enameled steel reflector is finished green outside, white inside. Inner auxiliary reflector has special oxidized aluminum finish.

Pendent hood is malleable iron, tapped ¾-inch standard, supplied tapped 1-inch, when specified. Universal mounting bracket hood is cast aluminum. All metal fittings not aluminum castings are cadmium-plated to resist corrosion.

Packed one in a standard package.

For 300 and 500-Watt Lamps

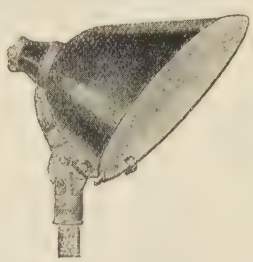
No. 5770, with Pendent Hood	each	$17.00
No. 5771, with Universal Mounting Bracket	each	19.00
No. 5772, (No. 5770, Less Inner Reflector)	each	14.00
No. 5773, (No. 5771, Less Inner Reflector)	each	16.00
No. 5774, (No. 5771 with Concealed Wiring, Mounting Bracket for 1½-Inch I.P.)	each	21.00
No. 5775, Same as No. 5774, but Less Inner Reflector	each	18.00

For 750, 1000 and 1500-Watt Lamps

No. 5970, with Pendent Hood	each	$18.00
No. 5971, with Universal Mounting Bracket	each	20.00
No. 5973, (No. 5970, Less Inner Reflector)	each	15.00
No. 5974, (No. 5971, Less Inner Reflector)	each	17.00
No. 5975, (No. 5971, with Concealed Wiring Mounting Bracket for 1½-Inch I.P.)	each	22.00
No. 5976, (No. 5975, Less Inner Reflector)	each	19.00

Benjamin Big-Ben Floodlights

For 750, 1000, 1500 and 2000-Watt Lamps



A long range, diffusing floodlight for lighting outdoor sport and recreational areas where greater distances are encountered.

Fixture hood is fitted with removable cast aluminum cap which carries socket as a unit. Cap has two porcelain knobs at sides and is fitted with one-piece porcelain insulated wire entrance bushing at bottom.

Mogul base porcelain socket is attached to hood cap.

Inner reflector of oxidized aluminum is positioned deep back in fixture and is closely fitted to lamp neck so as to intercept and utilize the greatest quantity of light.

Porcelain enameled steel reflector, green outside, white inside. All metal parts are aluminum or cadmium-plated.

No. 5776, with Slip-Fitter Base	each	$65.00
No. 5778, with Cross Arm Base	each	67.50
No. 5780, with Wall Bracket Support	each	72.50

Benjamin Utility Portable Floodlights

Has ample beam strength and sufficient beam control to meet the needs of smaller type flood-lighting jobs where it is necessary to project light to a considerable distance from place where floodlights are mounted.

With polished aluminum alloy reflecting surfaces sealed by heat-resisting stippled glass covers and special gaskets. Two wing nuts control adjustment so fixtures can be tilted up or down and turned in a complete circle.

Furnished completely wired.

For 150-200-Watt Lamps—Reflector Diameter, 10⅞″

	*With Pedestal Base and Removable Spike			†With Pipe Bracket Fitting			Cover Glasses Only		
Stip. Cover Glass	Cat. No.	Each	Ship. Wt. Lbs.	Cat. No.	Each	Ship. Wt. Lbs.	Cat. No.	Each	Ship Wt. Lbs.
Clear	5815	$12.00	10	5915	$12.00	8½	5802CL	$3.50	2½
Red	5816	14.00	10	5916	14.00	8½	5802R	5.50	2½
Green	5817	14.00	10	5917	14.00	8½	5802G	5.50	2½
Amber	5818	14.00	10	5918	14.00	8½	5802A	5.50	2½
Blue	5819	14.00	10	5919	14.00	8½	5802B	5.50	2½

For 300-500-Watt Lamps—Reflector Diameter, 13½″

Clear	5805	$22.00	11	5905	$22.00	10	5803CL	$5.00	5
Red	5806	26.00	11	5906	26.00	10	5803R	9.00	5
Green	5807	26.00	11	5907	26.00	10	5803G	9.00	5
Amber	5808	26.00	11	5908	26.00	10	5803A	9.00	5
Blue	5809	26.00	11	5909	26.00	10	5803B	9.00	5

*For mounting in turf; with heavy duty attachment cord and plug. †To attach to pipe standards. Tapped for ½-inch i.p. With pig-tail for lead-in to fitting.

Benjamin Junior Portable Floodlights

A wide-spread, diffusing floodlight for use where light can be mounted relatively close to object or area to be floodlighted.

Porcelain enameled steel reflector is green outside, white inside. Reflecting surfaces are sealed against weather and dust by plain cover glasses and gaskets held by metal retaining bands. Can be tilted up or down and turned in a complete circle by loosening wing nuts.

Furnished completely wired.

For 75-100-Watt Lamps—Reflector Diameter, 8½″

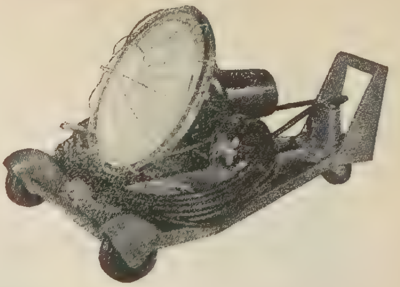
	*With Pedestal Base and Removable Spike			†With Pipe Bracket Fitting			Cover Glasses Only		
Cover Glass	Cat. No.	Each	Ship. Wt. Lbs.	Cat. No.	Each	Ship. Wt. Lbs.	Cat. No.	Each	Ship. Wt. Lbs.
Clear	5810	$7.25	7	5910	$7.25	5½	5801CL	$1.70	1½
Red	5811	8.25	7	5911	8.25	5½	5801R	2.70	1½
Green	5812	8.25	7	5912	8.25	5½	5801G	2.70	1½
Amber	5813	8.25	7	5913	8.25	5½	5801A	2.70	1½
Blue	5814	8.25	7	5914	8.25	5½	5801B	2.70	1½

For 150-200-Watt Lamps—Reflector Diameter, 10⅞″

Clear	5820	$12.00	10	5920	$12.00	9½	5802CL	$3.50	2½
Red	5821	14.00	10	5921	14.00	9½	5802R	5.50	2½
Green	5822	14.00	10	5922	14.00	9½	5802G	5.50	2½
Amber	5823	14.00	10	5923	14.00	9½	5802A	5.50	2½
Blue	5824	14.00	10	5924	14.00	9½	5802B	5.50	2½

*For mounting in turf; with rubber-covered attachment cord and plug. †To attach to pipe standards. Tapped for ½-inch i.p. With pig-tail for lead-in to fitting.

Benjamin Mobilites



For automobile repair work the Mobilite can be used like a mechanic's creeper and rolled under car to light any portion being worked on. Clearance of Mobilite is so low that the 100-watt fixture will roll under running board of a car, bus or truck. In unlighted pits and under hydraulic lifts Mobilite makes greasing and service easier.

The Mobilite can be easily pushed or rolled anywhere—yet once set leaves both hands free for work. Cast iron truck has three fibre rollers, two at front and one at rear which is pivoted. Truck is enameled a brilliant red. A handle is provided for carrying the fixture about.

Porcelain enameled steel reflector is green outside, white inside. Can be tilted upward by loosening wing nut.

Reflector interior is sealed against dust and dirt by the cover glass, which is held in place by a removable metal band and retaining gasket. A rust-resisting guard welded to cover band, protects glass. Clear covers: plain on 100-watt units and stippled on 200-watt units.

Fixture is wired; with 25 feet of rubber-covered cable and rubber plug. A strain relief is provided at back of truck. Medium base socket—N.E.C. standard.

	With 2-Wire Cable			With 3-Wire Cable		
Size Lamp Watts	Cat. No.	Each	Ship. Wt., Lbs.	Cat. No.	Each	Ship. Wt., Lbs.
75, 100	5791	$15.00	24	5793	$15.75	24
150, 200	5792	19.00	25	5794	19.75	26

Benjamin Pit and Tunnel Lighting Fixtures

For Correct Lighting in All Types of Pits

National Electrical Code Standard

The proper lighting of pit interiors and the vehicles over the pits, lessens the danger of accidents to workers and increases their speed and effectiveness. The Benjamin Pit Lighting Fixture with refracting glass cover offers a most satisfactory means of obtaining this correct illumination.

The efficient trough-shaped porcelain enameled steel reflector assures maximum light output, while the refracting glass cover concentrates the major portion of the light on the underside of the object over the pit.

Suitable for built-in or surface installation in locations like automobile service and greasing pits, railway and traction line repair pits, viaducts, tunnels and similar locations. In some types of locations, such as viaducts, tunnels and subways, where lighting requirements are of a general nature, the pit light with a plain glass cover will be found more satisfactory than the refracting.

Fixture consists of a cover and a cast iron box which are held together by four bolts. Cover includes a cast iron frame, a heat-resisting glass cover, a double rubber gasket, which seals cover frame to box and glass to cover frame, and a brass wire guard.

The cast iron box includes a porcelain enameled steel trough-shaped reflector and a keyless socket. Box is tapped at both ends for either ½, ¾ or 1½-inch conduit.

Packed one in a standard package.

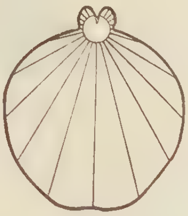
Size Lamp Watts	Dimen., In. Depth	Dimen., In. Length	Dimen., In. Width	Wt. Lbs. Std. Pkg.	With Refracting Glass Cover Cat. No.	With Refracting Glass Cover Each	With Plain Glass Cover Cat. No.	With Plain Glass Cover Each
100, 150	6¼	12½	8⅜	23	5715	$18.00	5710	$18.00
*200	7⅜	13¾	8⅜	26½	5720	20.00	5717	20.00

*With wire clamp for feed wires.

Type 79 Benjamin Glassteel Diffusers

Complete with Hood, Reflector and Globe

National Electrical Code Standard



Provides soft, even light over a wide range of intensities. Direct and reflected glare is eliminated. Openings at the top of the reflector give ample light on the ceiling to relieve contrasts between the fixture and its background.

Composed of two separable elements—a hood with a wiring terminal base and a complete assembly of reflector globe and lamp, which can be taken down as one piece for easy cleaning. A slight upward pressure against the reflector rim, less than a quarter turn to the left and reflector assembly is released from hood; to put up—simply turn right and reflector is secured.

The terminal base in the hood is extremely simple to wire. Both wiring leads are brought in through the single center hole in the hood and terminal base.

A single lever on the side of the reflector controls the clamping or release of the globe in the fixture.

Reflector is porcelain enameled steel, with Benjamin Type 79 bayonet-lock coupling. Reflectors have built-in lamp holders and bayonet plate. Standard reflector has apertures at top for passage of light to ceiling.

Terminal base, N.E.C. standard, simple-to-wire. One type of terminal base is standard in both outlet box and pendent type hoods and accommodates reflectors with medium or mogul base lamp holders.

Three types of hoods are provided, outlet box, angle and pendent. Outlet type has one hole slotted for easy attachment.

Angle and pendent hoods are tapped for ½ inch conduit, can be supplied in ¾ inch, when specified.

Reflectors are white porcelain enameled inside and out, with blue-black bead. Spring clamp globe holder, hood and bayonet plate are cadmium-plated.

Pendent Hood Type with Keyless Lamp Holder

Cast iron; tapped ½ inch standard; ¾ inch when specified.

Size Lamp Watts	Dimen. In. Diam.	Ht.	Std. Pkg.	With Opal Glass Globe Cat. No.	Each	Wt. Lbs. Std. Pkg.	With Daylight Glass Globe Cat. No.	Each	Wt. Lbs. Std. Pkg.
*150, 200	18	13	4	7201	$9.30	52	7226	$9.80	52
300, 500	20	15 5/16	4	7202	12.90	68	7227	13.65	68
750, 1000	24	18 1/16	2	7203	18.90	70	7228	20.65	70

Ceiling Hood Type with Keyless Lamp Holder

Ceiling type hoods are cast iron, and fit 4-inch standard round or octagonal outlet boxes.

*150, 200	18	12½	4	9201	$9.30	54	9226	$9.80	54
300, 500	20	14 13/16	4	9202	12.90	70	9227	13.65	70
750, 1000	24	17 9/16	2	9203	18.90	70	9228	20.65	70

Angle Type Hood with Keyless Lamp Holder

Cast iron. Tapped ½ inch standard; ¾ inch when specified.

*150, 200	18	14⅛	4	3201	$9.30	44	3226	$9.80	44
300, 500	20	16 7/16	4	3202	12.90	50	3227	13.65	50
750, 1000	24	19¾	2	3203	18.90	50	3228	20.65	50

Extra Reflectors for Easy Maintenance of System

Consists of Reflector, Lamp Holder and Globe

*150, 200	18	11 1/16	4	1201	$8.50	52	1226	$9.00	54
300, 500	20	13⅜	4	1202	12.10	60	1227	12.85	67
750, 1000	24	16⅛	2	1203	18.10	61½	1228	19.85	68

*When using 150-watt lamp, socket extension No. 91 must be used to correctly position lamp in reflector.

Lamp Holders

Shock-absorbing lamp holders furnished in place of regular rigid lamp holder at an advance of 10 cents in price. When ordering, suffix regular reflector number with "SHB."

Type 79 Benjamin RLM Dome Reflectors

Porcelain Enameled Steel

National Electrical Code Standard

Constructed on a unique principle which permits the reflector, together with the lamp, to be taken down with one simple movement for easy cleaning.

Unit consists of two separable elements—hood with wiring terminal base, and reflector to which is assembled the lamp holding element. A slight upward pressure against reflector rim, less than a quarter turn to left, and reflector with lamp comes down as a unit.

The 3-point bayonet plate on top of the reflector is slipped into bottom of hood and both locked together by a quarter turn to right.

Contact is made at any point where reflector heel may be entered in hood. Polarization is automatically provided for by the circular design of the contacts.

Reflector is seamless porcelain enameled steel with bayonet-lock coupling. With porcelain lamp holder. Angle of cut off, 17½°.

Bayonet Type Coupling Permits Taking Down Reflector and Lamp as a Complete Unit

Terminal base is N.E.C. standard. One type of terminal base is standard in both ceiling and pendent type hoods and accommodates reflectors with medium or mogul base lamp holders. Three types of hoods are provided, ceiling type outlet box, pendent and angle, side entrance type; outlet type has holes slotted for attachment.

Reflectors are porcelain enameled steel, green outside, white inside. Hood and bayonet plate are cadmium-plated.

Prices do not include wires or lamps.

Pendent Hood and Reflector with Keyless Lamp Holder

Pendent hoods are cast iron, tapped ½ inch standard; ¾ inch if specified.

Cat. No.	Each	Size Lamp Watts	Dimen., Inches Diam.	Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
7641	$3.60	60, 100	12	9⅞	10	42
7642	3.80	150	14	11	10	49
7643	4.40	200	16	12⅛	10	56
7644	5.70	300, 500	18	13 13/16	5	43
7645	7.60	750, 1000	20	16⅝	5	54

Ceiling Type Hood and Reflector with Keyless Lamp Holder

Ceiling type hoods are cast iron and fit 4-inch standard outlet boxes of 1½ inches or more depth.

9641	$3.60	60, 100	12	9¾	10	45
9642	3.80	150	14	10⅞	10	52
9643	4.40	200	16	12	10	59
9644	5.70	300, 500	18	13 11/16	5	46
9645	7.60	750, 1000	20	16⅜	5	57

Angle Type Hood and Reflector with Keyless Lamp Holder

Angle type hoods are cast iron. Tapped ½ inch standard; ¾ inch when specified.

3641	$3.60	60, 100	12	11 1/16	10	52
3642	3.80	150	14	12 3/16	10	59
3643	4.40	200	16	13 5/16	10	66
3644	5.70	300, 500	18	15	5	48
3645	7.60	750, 1000	20	17 11/16	5	59

Rigid keyless lamp holders are regularly supplied but when specified the following lamp holders can be furnished: Pull chain, medium base only, 80 cents advance list; self-locking, medium base only, 50 cents advance list; shock absorbing, medium or mogul base, 10 cents advance list.

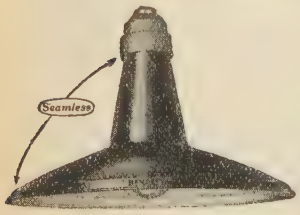
Extra Reflectors

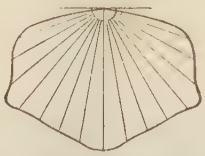
Fixtures, complete except for hoods, are available for easy maintenance of the system. When ordering, specify catalogue number of complete fixture with the explanation "Less Hood," and deduct 80 cents from list price.

Type 79 Benjamin Shallow Bowl Reflectors

Porcelain Enameled Steel

National Electrical Code Standard





Characteristic Distribution Curve

The reflector is seamless porcelain enameled steel with Benjamin Type 79 bayonet-lock coupling. The reflector includes a N. E. C. standard porcelain lamp holder and a 3-point bayonet plate.

One type of terminal base is standard in both ceiling and pendent type hoods and accommodates reflectors with medium or mogul base lamp holders.

Three types of hoods are provided, ceiling type outlet box, pendent, and angle side entrance. Outlet type hood has one hole slotted for easy attachment.

Reflectors are porcelain enameled steel; green outside, white inside. Hood and bayonet plate are cadmium-plated to prevent corrosion.

Pendent Hood and Reflector with Keyless Lamp Holder

Pendent hoods are cast iron, tapped ½ inch standard; ¾ inch if specified.

Cat. No.	Each	Size Lamp Watts	Dimen., Inches Diam.	Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
7437	**$3.50**	50, 60	12	8 3/8	10	40
7421	**3.60**	75, 100	12	9 1/4	10	40
7423	**3.80**	150	14	10 3/8	10	43
7425	**4.40**	200	16	11 1/4	10	55
7509	**5.70**	300, 500	18	13	5	49

Ceiling Type Hood and Reflector with Keyless Lamp Holder

Ceiling type hoods are of cast iron and fit 4-inch standard outlet boxes of 1½ inches or more depth.

9437	**$3.50**	50, 60	12	7 7/8	10	43
9421	**3.60**	75, 100	12	8 3/4	10	43
9423	**3.80**	150	14	9 7/8	10	46
9425	**4.40**	200	16	10 3/4	10	58
9509	**5.70**	300, 500	18	12 1/2	5	52

Angle Type Hood and Reflector with Keyless Lamp Holder

Angle type hoods are cast iron. Tapped ½ inch standard; ¾ inch when specified.

3437	**$3.50**	50, 60	12	9 3/16	10	50
3421	**3.60**	75, 100	12	10 1/16	10	50
3423	**3.80**	150	14	11 3/16	10	53
3425	**4.40**	200	16	12 1/16	10	65
3509	**5.70**	300, 500	18	13 3/4	5	54

Prices do not include wires or lamps.

Extra Reflectors

Fixtures, complete, except for hoods, are available for easy maintenance of the system. When ordering, specify catalogue number of complete fixture with the explanation "Less Hood," and deduct 80 cents from list price.

Lamp Holders

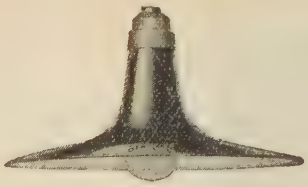
Pull chain lamp holders with straight inner pull for medium base only, 80 cents advance list. When ordering suffix regular reflector number with "PUL."

Self-locking lamp holder prevents unauthorized lamp removal, medium base only, 50 cents advance list. When ordering, suffix regular reflector number with "LOK."

Shock-absorbing lamp holders lengthen life, medium or mogul base. 10 cents advance list. When ordering suffix regular reflector number with "SHB."

Type 79 Benjamin Flat Cone Reflectors

Porcelain Enameled Steel



No. 7402
150-Watt

Characteristic Distribution Curve

The reflector is seamless porcelain enameled steel with Benjamin Type 79 bayonet-lock coupling. The reflector includes an N. E. C. standard porcelain lamp holder and a 3-point bayonet plate.

One type of terminal base is standard in both ceiling and pendent type hoods and accommodates reflectors with medium or mogul base lamp holders.

Three types of hoods are provided, ceiling type outlet box, pendent and angle side entrance. Outlet type hood has one hole slotted for easy attachment.

Reflectors are porcelain enameled steel; green outside, white inside. Hood and bayonet plate are cadmium-plated to prevent corrosion.

Pendent Hood and Reflector with Keyless Lamp Holder

Pendent hoods are cast iron, tapped ½ inch standard; ¾ inch if specified.

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
7411	**$3.60**	75, 100	14	8 3/16	10	45
7402	**3.80**	150	16	9 1/2	10	53
7403	**4.40**	200	18	10 3/8	10	59

Ceiling Type Hood and Reflector with Keyless Lamp Holder

Ceiling type hoods are of cast iron and fit 4-inch standard outlet boxes.

9411	**$3.60**	75, 100	14	8 1/16	10	45
9402	**3.80**	150	16	9	10	53
9403	**4.40**	200	18	9 7/8	10	59

Angle Type Hood and Reflector with Keyless Lamp Holder

Angle type hoods are cast iron, 2-piece construction, and allow reflector to be rotated and locked at any desired position by a set screw. Tapped ½ inch standard; ¾ inch when specified.

3411	**$3.60**	75, 100	14	9 3/8	10	55
3402	**3.80**	150	16	10 5/16	10	63
3403	**4.40**	200	18	11 3/16	10	69

Prices do not include wires or lamps.

Extra Reflectors

Fixtures, complete, except for hoods, are available for easy maintenance of the system. When ordering, specify catalogue number of complete fixture with the explanation "Less Hood," and deduct 80 cents from list price.

Lamp Holders

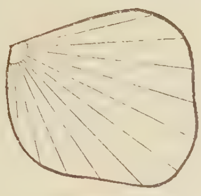
Pull chain lamp holders with straight inner pull for medium base only, 80 cents advance list. When ordering suffix regular reflector number with "PUL."

Self-locking lamp holder prevents unauthorized lamp removal, medium base only, 50 cents advance list. When ordering, suffix regular reflector number with "LOK."

Shock-absorbing lamp holders lengthen lamp life, medium or mogul base. 10 cents advance list. When ordering suffix regular reflector number with "SHB."

Type 79 Benjamin Symmetrical Angle Reflectors

Porcelain Enameled Steel



Characteristic Distribution Curve

The reflector is seamless porcelain enameled steel with Benjamin Type 79 bayonet-lock coupling. The reflector includes a N.E.C. standard porcelain lamp holder and a 3-point bayonet plate.

One type of terminal base is standard in both ceiling and pendent type hoods and accommodates reflectors with medium or mogul base lamp holders.

Three types of hoods are provided, ceiling type outlet box, pendent and angle side entrance. Outlet type hood has one hole slotted for easy attachment.

Reflectors are porcelain enameled steel; green outside, white inside. Hood and bayonet plate are cadmium-plated to prevent corrosion.

Pendent Hood and Reflector with Keyless Lamp Holder

Pendent hoods are cast iron, tapped ½ inch standard; ¾ inch if specified.

Cat. No.	Each	Size Lamp Watts	Dimen., Inches Diam.	Dimen., Inches Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
7541	**$3.25**	50, 100	8	$10\frac{3}{4}$	10	28
7542	**3.75**	150, 200	10	$13\frac{7}{16}$	10	35
7543	**5.35**	300, 500	12	$16\frac{13}{16}$	5	27

Ceiling Type Hood and Reflector with Keyless Lamp Holder

Ceiling type hoods are of cast iron and fit 4-inch standard outlet boxes.

9541	**$3.25**	50, 100	8	$10\frac{1}{4}$	10	29
9542	**3.75**	150, 200	10	$12\frac{15}{16}$	10	36
9543	**5.35**	300, 500	12	$16\frac{5}{16}$	5	28

Angle Type Hood and Reflector with Keyless Lamp Holder

Angle type hoods are cast iron. Tapped ½ inch standard; ¾ inch when specified.

3541	**$3.25**	50, 100	8	$11\frac{9}{16}$	10	39
3542	**3.75**	150, 200	10	$14\frac{1}{4}$	10	46
3543	**5.35**	300, 500	12	$17\frac{5}{8}$	5	33

Prices do not include wires or lamps.

Extra Reflectors

Fixtures, complete, except for hoods, are available for easy maintenance of the system. When ordering, specify catalogue number of complete fixture with the explanation "Less Hood," and deduct 80 cents from list price.

Lamp Holders

Pull chain lamp holders with straight inner pull for medium base only, 80 cents advance list. When ordering suffix regular reflector number with "PUL."

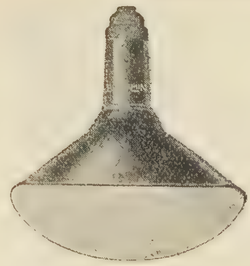
Self-locking lamp holder prevents unauthorized lamp removal, medium base only, 50 cents advance list. When ordering, suffix regular reflector number with "LOK."

Shock-absorbing lamp holders lengthen lamp life, medium or mogul base, 10 cents advance list. When ordering suffix regular reflector number with "SHB."

Type 79 Benjamin Elliptical Angle Reflectors

Porcelain Enameled Steel

National Electrical Code Standard



Exclusive Benjamin principle permits reflector together with lamp, to be taken down with one simple movement, for easy cleaning.

Each unit consists of two separable assemblies—a hood with a wiring terminal base and a reflector with a lamp holder and attaching plate.

Automatic polarization is provided by the circular contact design and contact may be made at any point where bayonet plate can be inserted in hood.

Reflector is porcelain enameled steel, green outside, white inside; with Type 79 bayonet-lock coupling. Reflector includes a porcelain lamp holder and a 3-point bayonet plate. Angle of cut off is 17½°. Hood and bayonet plate are cadmium-plated to prevent corrosion.

One type of terminal base is standard in both ceiling and pendent type hoods and accommodates reflectors with medium or mogul base lamp holders.

Three types of hoods are provided, ceiling type outlet box, pendent and angle side entrance.

Pendent Type Hood and Reflector with Keyless Lamp Holder

Pendent hoods are cast iron. Hoods for medium base reflectors tapped ½-inch standard; ¾-inch, if specified. Hoods for mogul base reflectors tapped ¾-inch standard.

Cat. No.	Each	Size Lamp Watts	Dimen., In. Width	Dimen., In. Depth	Dimen., In. Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
7522	**$3.80**	75, 100	$13\frac{1}{8}$	$8\frac{7}{8}$	$14\frac{7}{16}$	10	54
7525	**4.50**	150	$13\frac{1}{8}$	$8\frac{7}{8}$	$15\frac{7}{16}$	10	56
7526	**5.10**	200	$16\frac{3}{8}$	$11\frac{1}{8}$	$17\frac{13}{16}$	10	68
7537	**9.10**	300, 500	$19\frac{7}{8}$	$13\frac{7}{8}$	$21\frac{7}{16}$	5	40
7538	**10.10**	750, 1000	$19\frac{7}{8}$	$13\frac{7}{8}$	$22\frac{1}{16}$	2	27

Ceiling Type Hood and Reflector with Keyless Lamp Holder

These hoods are cast iron and fit 4-inch standard octagonal and round outlet boxes of 1½ inches or more depth.

9522	**$3.80**	75, 100	$13\frac{1}{8}$	$8\frac{7}{8}$	$13\frac{15}{16}$	10	60
9525	**4.50**	150	$13\frac{1}{8}$	$8\frac{7}{8}$	$14\frac{15}{16}$	10	62
9526	**5.10**	200	$16\frac{3}{8}$	$11\frac{1}{8}$	$17\frac{5}{16}$	10	74
9537	**9.10**	300, 500	$19\frac{7}{8}$	$13\frac{7}{8}$	$20\frac{15}{16}$	5	43
9538	**10.10**	750, 1000	$19\frac{7}{8}$	$13\frac{7}{8}$	$21\frac{9}{16}$	2	28

Angle Type Hood and Reflector with Keyless Lamp Holder

Angle type hoods are cast iron. Hoods for medium base reflectors tapped ½-inch standard; ¾-inch when specified. Hoods for mogul base reflectors tapped ¾-inch standard.

3522	**$3.80**	75, 100	$13\frac{1}{8}$	$8\frac{7}{8}$	$15\frac{1}{4}$	10	70
3525	**4.50**	150	$13\frac{1}{8}$	$8\frac{7}{8}$	$16\frac{1}{4}$	10	72
3526	**5.10**	200	$16\frac{3}{8}$	$11\frac{1}{8}$	$19\frac{5}{8}$	10	84
3537	**9.10**	300, 500	$19\frac{7}{8}$	$13\frac{7}{8}$	$22\frac{1}{4}$	5	48
3538	**10.10**	750, 1000	$19\frac{7}{8}$	$13\frac{7}{8}$	$22\frac{3}{4}$	2	33

Prices do not include wires or lamps.

Extra Reflectors

Fixtures, complete, except for hoods, are available for easy maintenance of the system. When ordering, specify Cat. No. of complete fixture with explanation, "Less Hood," and deduct 80 cents from list price.

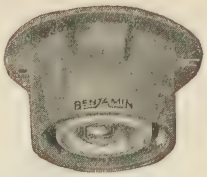
Lamp Holders

Pull chain lamp holders have the exclusive Benjamin Inner Pull feature in which the chain comes straight down inside the reflector. Furnished with any of the medium base fixtures listed above at an 80 cents advance in fixture list price. When ordering, suffix regular fixture number with "PUL."

Self-locking lamp holders prevent unauthorized lamp removal. Furnished with any of medium base fixtures listed above at 50 cents advance in fixture list price. When ordering, suffix regular fixture number with "LOK."

No. 9 Benjamin Type 79 Ceiling Type Hoods

National Electrical Code Standard
1500 Watts, 600 Volts



The No. 9 Hood is standard for all Benjamin Type 79 ceiling type reflector fixtures. It incorporates a universal type of wiring terminal base which takes interchangeably any medium or mogul base Type 79 reflector.

Hood is cast iron, cadmium-plated. Body of wiring terminal base is of porcelain. Hood fits 4-inch standard outlet boxes of 1½ inches or more depth. One screw hole in hood is slotted for easy attachment.

Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.
9	$.80	10	16

Type 79 Benjamin Hoods

National Electrical Code Standard
1500 Watts, 600 Volts

No. 3

No. 7

Standard for Benjamin Type Reflector Fixtures. Has universal type of wiring terminal base which takes interchangeably any medium or mogul base Type 79 Reflector. Hood is cast iron, cadmium-plated; body of terminal base, porcelain. Hood tapped for ½-inch conduit standard; ¾-inch when specified at same price.

No. 3 Angle Type

Used to bring wires in at right angles to reflector.

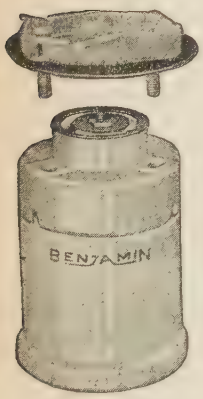
Standard package, 10; weight, 20 pounds.
No. 3.....each $.80

No. 7 Pendent Type

Standard package, 10; weight, 14 pounds.
No. 7.....each $.80

No. 2760 Benjamin Keyless Mogul Base Lamp Holder Assemblies

National Electrical Code Standard
1500 Watts, 600 Volts



This is standard equipment for Benjamin Mogul Base Type 79 Reflector Equipment.

Consists of a porcelain keyless mogul base socket and Type 79 bayonet attaching plate with composition gasket and attaching screws.

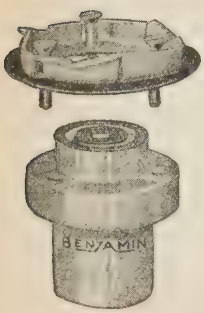
Plate and screw are cadmium-plated.

Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.
2760	$1.10	10	13½

No. 2751 Benjamin Keyless Medium Base Lamp Holder Assemblies

National Electrical Code Standard

660 Watts, 600 Volts



This is standard equipment for Benjamin Medium Base Type 79 Reflector Equipment. Consists of a one-piece porcelain keyless medium base lamp holder and type 79 bayonet attaching plate with composition gasket and attaching screws.

Plate and screws are cadmium-plated.

Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.
2751	$.55	10	8½

No. 2762 Benjamin Shock Absorbing Mogul Base Lamp Holder Assemblies

National Electrical Code Standard
1500 Watts, 600 Volts

The shock absorbing lamp holder lengthens the lamp life by guarding the lamp filament against vibration, jars and shock.

Consists of a keyless mogul base lamp holder, Type 79 bayonet attaching plate, composition gasket and attaching screws.

Bayonet plate and screws are cadmium-plated.

Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.
2762	$1.20	10	13½

No. 2753 Benjamin Shock Absorbing Medium Base Lamp Holder Assemblies

National Electrical Code Standard
660 Watts, 600 Volts

The Benjamin shock absorbing lamp holder lengthens lamp life, by guarding the lamp filament against vibration, jars and shock. For use with all type 79 medium base reflector equipment.

A 1-piece porcelain medium base keyless lamp holder, with shock absorbing spring and a Type 79 bayonet attaching plate with composition gasket and attaching screws. Plate and attaching screws cadmium-plated.

Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.
2753	$.65	10	10

No. 2752 Benjamin Pull Chain Medium Base Lamp Holder Assemblies

National Electrical Code Standard
660 Watts, 250 Volts

This pull chain lamp holder with the Benjamin Inner Pull Feature, provides a reliable method of individually controlling Benjamin Medium Base Type 79 Reflector Equipment.

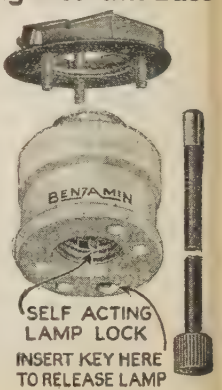
Consists of 1-piece medium base porcelain lamp holder and a Type 79 bayonet attaching plate with composition gasket and attaching screws.

Plate and screws cadmium-plated.

Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.
2752	$1.35	10	8½

No. 2754 Benjamin Self-Locking Medium Base Lamp Holder Assemblies

National Electrical Code Standard
660 Watts, 600 Volts



The socket automatically locks as the lamp is screwed in.

Prevents unauthorized removal of lamps. May be used in all medium base Type 79 reflector equipment.

Consists of a medium base porcelain lamp holder with self-locking feature, bayonet attaching plate, composition gasket and screws. Screws and plate are cadmium-plated.

Cat. No.	Each	Std. Pkg.	Wt., Lbs. Std. Pkg.
2754	$1.05	10	11½
Key Only for Releasing Lamp			
1399	1.00	1	½

Benjamin Reflector Sockets
Porcelain Enameled Steel

USES.—Each type of reflector performs a definite service. See individual description immediately above each listing.

REFLECTORS—Seamless Crysteel porcelain enameled steel. They are weather-proof and may be used for indoor and outdoor service.

SOCKETS.—National Electrical Code Standard. Sockets are 2-piece porcelain, keyless, easy-to-wire type with Benjamin Lamp Grip which prevents loosening and falling of lamps under vibration.

Locking Type Socket (LOK) will be supplied with reflectors up to and including 200 watt sizes at an advance of 50 cents each. Key, No. 1399, at $1.00 each. Pull chain socket (PUL) with lamp grip will be supplied with reflectors up to and including 200 watt sizes at an advance of 80 cents. Shock-absorbing socket (SHB) at 10 cents additional to list price.

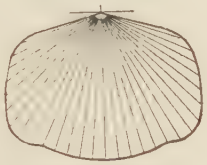
FITTINGS.—Reflectors are supported by heavy cast fitting, independent of socket, making the whole fixture uniformly strong.

TAPPING.—Fitting tapped for ½-inch iron pipe regularly furnished; ¾-inch tapping or ½-inch insulating bushing, No. 1265 for drop cord use, furnished if specified at no advance in price.

FINISH.—Reflectors are Benjamin green porcelain enamel outside; white inside.

Benjamin Dome Reflector Sockets
R. L. M. Standard

No. 5642, 150-Watt



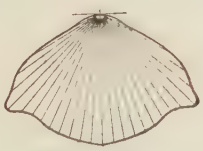
Characteristic Distribution Curve

For general illumination where it is desired to light both upright and flat surfaces and to eliminate sharp shadows by good diffusion.

Cat. No.	Each	Size of Lamp Watts	Dimen., In. Diam.	Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
5640	$3.20	50, 60	12	7 5/16	10	32
5641	3.30	75, 100	12	7 15/16	10	33
5642	3.50	150	14	9 1/16	10	41
5643	4.10	200	16	10 3/16	10	49
5644	5.30	300, 500	18	11 15/16	5	39
5645	7.20	750, 1000	20	14 3/4	5	49

Benjamin Bowl Reflector Sockets

No. 6189, 150-Watt



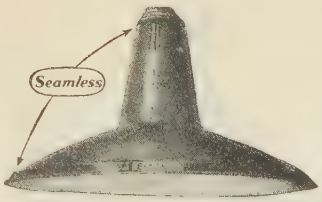
Characteristic Distribution Curve

For general illumination where the lighting of horizontal surfaces is of first importance and where a high intensity is required in a relatively small area.

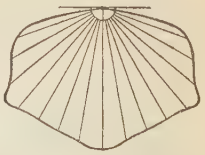
Cat. No.	Each	Size of Lamp Watts	Dimen., In. Diam.	Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
6166	$2.90	50, 60	7	7 3/8	10	24
6161	3.10	75, 100	8	8 3/8	10	26
6189	3.50	150	9	9 3/8	10	29
6169	3.50	200	10	10 1/2	10	29
6173	5.20	300, 500	12	11 7/8	5	21

Prices do not include wires or lamps.

Benjamin Shallow Bowl Reflector Sockets
Porcelain Enameled Steel



No. 5423
150-Watt

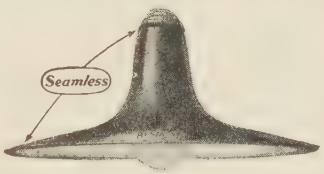


Characteristic Distribution Curve

For general illumination where the lighting requirement is of an extensive character and where eye shielding is not considered of first importance.

Cat. No.	Each	Size of Lamps Watts	Dimens., In. Diam.	Height	Std. Pkg.	Wt. Lbs.
5437	$3.20	50, 60	12	6 9/16	10	2 1/4
5421	3.30	75, 100	12	7 3/8	10	2 1/4
5423	3.50	150	14	8 1/2	10	2 3/4
5425	4.10	200	16	9 7/16	10	3 1/4
5509	5.30	300, 500	18	11 1/8	5	3 3/8

Benjamin Flat Cone Reflector Sockets
Porcelain Enameled Steel



No. 5402
150-Watt

Characteristic Distribution Curve

For broad extensive light distribution—for such places as lumber yards, railroad terminal yards and street lighting.

Cat. No.	Each	Size of Lamps Watts	Dimens., In. Diam.	Height	Std. Pkg.	Wt. Lbs.
5431	$3.30	50, 60	14	5 11/16	10	2 3/8
5401	3.30	75, 100	14	6 11/16	10	2 1/2
5402	3.50	150	16	7 5/8	10	3 1/8
5403	4.10	200	18	8 1/2	10	3 3/4

Benjamin Symmetrical Angle Socket-Reflector

No. 5542

For illuminating places where the light must come from the side.

REFLECTORS.—Seamless Crysteel porcelain enameled steel. They are weather-proof and may be used for indoor and outdoor service.

SOCKETS.—Two-piece, porcelain, keyless with Benjamin lamp grip which prevents loosening and falling of lamps under vibration.

TAPPING.—Fitting tapped for ½-inch iron pipe regularly furnished; ¾-inch tapping furnished if specified at no advance in price.

FINISH.—Reflectors are Benjamin green porcelain enamel outside; white inside.

Cat. No.	Each	Size of Lamp Watts	Dimensions, In. Diam.	Height	Std. Pkg.	Wt. Lbs. Each
5541	$2.95	50, 60, 75, 100	8	8 15/16	10	1 1/2
5542	3.45	150, 200	10	11 5/8	10	2
5543	4.95	300, 500	12	15	5	4

Benjamin Elliptical Angle Reflector Sockets

Porcelain Enameled Steel

No. 5525
Side View

No. 5525
Front View

The Benjamin Elliptical Angle Reflector Socket is used in places in industrial plants where lighting requirements cannot be satisfied with overhead illumination alone, as well as cases requiring illumination from the side.

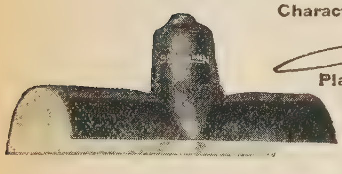
Reflectors are of porcelain enameled steel and are weather resisting. Socket is N. E. C. Standard, keyless two-piece porcelain easy-to-wire type with lamp grip which prevents lamps from becoming loosened by wind or vibration. Nos. 5522, 5525 and 5526, tapped for ½-inch pipe; ¾-inch if specified. Nos. 5537, 5538 tapped for ¾-inch iron pipe.

Cat. No.	Each	Size of Lamp Watts	Dimensions, Inches Diam.	Height	Net Weight Pounds	Standard Package
5522	**$3.50**	75, 100	8⅞x13¼	12⅝	2¾	10
5525	**4.20**	150	8⅞x13¼	13½	3	10
5526	**4.80**	200	11⅛x16⅜	16	3⅝	10
5537	**8.70**	300, 500	13⅞x19⅞	19⅝	3¾	5
5538	**9.70**	750,1000	13⅞x19⅞	20¼	4⅛	2

Prices do not include wires or lamps.

Benjamin Parabolites

Porcelain Enameled Steel



No. 1235, 150-Watt

Characteristic Distribution of Curve

Plane Through Major Axis

Plane Through Minor Axis

The Benjamin Parabolite is a specially designed fixture for the illumination of aisles, platforms, and other long narrow areas indoors or outdoors.

The reflector is porcelain enameled steel, white inside, and green outside. The socket is porcelain, keyless two-piece, easy-to-wire type with lamp grip. The separable X fitting is regularly tapped ½-inch and will be tapped ¾-inch if specified, at no advance in price. The light is projected in a narrow stream with a low cut-off on each side.

Cat. No.	Size of Lamp Watts	Dimensions, Inches Length	Height	Std. Pkg.	Wt. Lbs.	Price Each
1234	60, 75, 100	21	8½	1	3¾	**$8.00**
1235	150	21	9¼	1	3⅞	**8.80**
1236	200	21	10⅛	1	4⅛	**9.30**

Prices do not include wires or lamps.

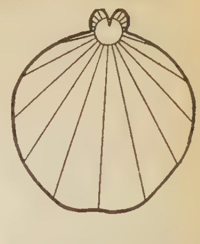
Benjamin Shock Absorber Suspension Fittings

Made of galvanized iron.

Cat. No.	Size Tapped In.	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
6030	½	10	9	**$.90**

Benjamin Threaded Hood Glassteel Diffusers

Complete with Hood, Reflector and Globe



No. 26300, 200-Watt

In addition to the accepted merits of the porcelain enameled steel reflector this combination offers the following advantages:—

1. Light is permitted to reach the ceiling which softens the contrast between the working plane and the space above the reflector. This increases eye comfort.
2. The brightness of the unit is reduced to about 3 or 5 candlepower per square inch which further reduces eye effort resulting from both direct and reflected glare.
3. Protection of the glass from excess breakage because surrounded by the steel reflector.
4. Exceptionally good appearance of the lighted unit.
5. Reflection and diffusion favorable to the needs of the daylight lamp.

The total light output of the Glassteel Diffuser with a clear lamp is equal to that of an R L M reflector and bowl-enameled lamp of corresponding size.

Diffuser directs light on ceiling (about 7 per cent) and also more light on higher angles.

Comparison of corresponding brightness favors the Glassteel equipment, which is 3 or 5 against 15 candlepower per square inch of the R L M reflector and bowl-enameled lamp.

Hood is of porcelain enameled steel with Benjamin R R Thread.

Type X supporting fitting, tapped for ½-in. conduit.

Porcelain 2-piece socket, easy-to-wire type.

Reflector is porcelain enameled steel in two sizes with Type R R Threaded Neck permitting easy removal of the reflector. Reflector has six apertures at top for the passage of light to the ceiling. It also embodies a spring globe holder facilitating easy removal of globe for cleaning.

White porcelain enamel with small neat dark blue bead at bottom edge of both hood and reflector.

Pendent Hood Type with Keyless Socket

With X style fitting; tapped ½ inch standard; ¾ inch when specified.

Size Lamp Watts	Dimen. In. Diam.	Ht.	Std. Pkg.	Wt., Lbs. Std. Pkg.	With Opal Glass Globe Cat. No.	Each	With Daylight Glass Globe Cat. No.	Each
150, 200	18	11¾	4	50	**26300**	**$9.00**	**26310**	**$9.50**
300, 500	20	13⅜	4	60	**26302**	**12.50**	**26312**	**13.25**

Ceiling Hood Type with Keyless Socket

Hood is for mounting direct to, and covering, a standard 4-inch outlet box.

150, 200	18	11¾	4	50	**26304**	**$9.00**	**26314**	**$9.50**
300, 500	20	13⅜	4	60	**26306**	**12.50**	**26316**	**13.25**

Benjamin Special Diffuser Reflectors

A diffuser reflector consisting of a dome reflector without apertures on the top and with a diffusing globe on a spring holder.

Reflectors are of porcelain enameled steel with either pendent or outlet type box of R R hood. Reflectors are attached to hood by means of heavy copper screw thread on reflector neck which makes removal for cleaning easy.

Reflectors finished in white porcelain enamel outside and inside, with black beaded edge. Hoods are white porcelain enameled.

Pendent Hood Type

Tapped for ½-inch conduit.

Size Lamp Watts	Diam. In.	Std. Pkg.	Wt., Lbs. Std. Pkg.	With Opal Glass Globe Cat. No.	Each	With Daylight Glass Globe Cat. No.	Each
150, 200	18	4	23	**26350**	**$9.00**	**26360**	**$9.50**
300, 500	20	4	30	**26352**	**12.50**	**26362**	**13.25**

Ceiling Hood Type

Attaches to 4-inch standard outlet boxes.

150, 200	18	4	23	**26354**	**$9.00**	**26364**	**$9.50**
300, 500	20	4	30	**26356**	**12.50**	**26366**	**13.25**

Benjamin Threaded Hood Fixtures

Sturdox Fixtures

Made to withstand service conditions.

Two-piece socket of heavy porcelain is unusually well constructed and simple to wire.

Reflectors may be interchanged without disturbing wiring as every Sturdox reflector fits every Sturdox hood.

Type RR Equipment

Suitable for use around railroad yards, steel mills and other industrial plants where conditions require the most rugged and sturdy equipment.

The Type RR thread is the basis of railroad equipment. It allows easy removal of reflectors for cleaning and interchangeability among the various types and sizes of reflectors. Hoods are supplied in cast iron or porcelain enameled, in either pendent or outlet box type, and are threaded to accommodate any of the RR threaded neck reflectors shown to the right. Cast hoods are finished in green paint enamel and steel hoods in green porcelain enamel.

To obtain price of complete fixture add price of hood to price of reflector selected.

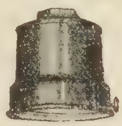
Pendent Cast Hoods with Sockets

Tapped for ½-inch i.p. standard; ¾-inch, if specified.

Sturdox Hood

No. 9200

Type RR Hood



No. 26050

Cat. No.	Each	Base	Std. Pkg.	Wt. Lbs. Std. Pkg.	Cat. No.	Each	Base	Std. Pkg.	Wt. Lbs. Std. Pkg.
9200	$1.30	Med.	10	21	26050	$2.30	Med.	10	25½
9205	1.80	Mogul	5	12	26055	2.70	Mogul	5	13½

Pendent Steel Hoods with Sockets

Tapped for ½-inch i.p. standard; ¾-inch, if specified.

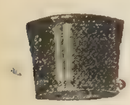
No. 9210

No. 26030

9210	$1.10	Med.	10	11½	26030	$1.95	Med.	10	12½
9215	1.60	Mogul	5	7	26035	2.35	Mogul	5	7½

Outlet Box Cast Hoods with Sockets

Fits 4-inch standard outlet box.



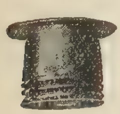
No. 9220

No. 26045

9220	$1.50	Med.	10	24	26045	$2.40	Med.	10	23½
9225	2.00	Mogul	5	14½	26049	2.80	Mogul	5	12½

Outlet Box Steel Hoods with Sockets

Fits 4-inch standard outlet box.



No. 9230

No. 26025

9230	$1.10	Med.	10	11½	26025	$1.95	Med.	10	12
9235	1.60	Mogul	5	7	26029	2.35	Mogul	5	7

Sockets

Shock-Absorbing Sockets.—Keyless, medium or mogul, add 10 cents to list price; when ordering, suffix Cat. No. of hood with "SHB." (Sturdox hoods only.)

Pull Chain Sockets.—Keyless, medium base only, 80 cents advance in list; suffix Cat. No. of hood with "PUL."

Self-Locking Sockets.—Keyless, medium base only, 50 cents advance in list; suffix Cat. No. of hood with "LOK."

Benjamin Threaded Hood Fixtures

Reflectors for Sturdox and Type RR

R L M Dome Reflectors

No. 26014

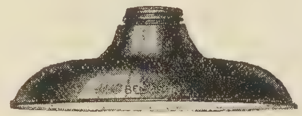
Without the use of tools, reflectors may be removed and given a thorough washing. They are replaced just as easily.

Every threaded reflector will fit any threaded hood in the Benjamin Sturdox and Type RR Lines.

Finish, outside of reflector is Benjamin green, inside is white porcelain enamel.

Cat. No.	Each	Size Lamp Watts	Dimen., Inches Diam.	Dimen., Inches Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
26012	$2.20	75, 100	12	4⅜	10	20½
26014	2.40	150	14	5 9/16	10	29
26016	3.00	200	16	6 11/16	10	35
26018	3.70	300, 500	18	8 1/16	5	32½
26020	5.60	750, 1000	20	11	5	38

Shallow Bowl Reflectors

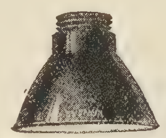


No. 26416

Best adapted to the lighting of yards, warehouses and platforms, or where it is desired that one unit light a large area.

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Dimen., In. Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
26412	$2.10	50	12	2½	10	18
26414	2.40	75, 100, 150	14	3⅜	10	23
26416	3.00	200	16	4⅜	10	31½
26418	3.70	300, 500	18	5¾	5	25½

Bowl Reflectors

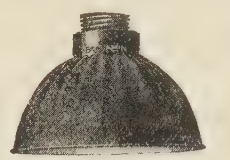


No. 26109

For general illumination where the lighting of horizontal surfaces is of first importance and where a high intensity is required in a relatively small area.

Cat. No.	Each	Size Lamp Watts	Dimen., Inches Diam.	Dimen., Inches Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
26108	$2.00	75, 100	8	5	10	16½
26109	2.40	150	9	5 13/16	10	17½
26110	2.40	200	10	6 15/16	10	18
26112	3.60	300, 500	12	7¾	5	15½

Fluted Bowl Reflectors

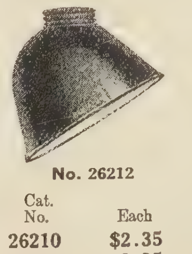


No. 26114

The only type of porcelain enameled steel reflector having an intensive distribution. It is used therefore for high mounting, i. e., 16 feet and upward.

Cat. No.	Each	Size Lamp Watts	Dimen., Inches Diam.	Dimen., Inches Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
26114	$3.60	300, 500	14	8 5/16	5	21
26117	8.10	750, 1000	18	12	5	34½

Symmetrical Angle Reflectors



No. 26212

For illuminating places where the light must come from the side.

Cat. No.	Each	Size Lamp Watts	Dimen., Inches Diam.	Dimen., Inches Height	Std. Pkg.	Wt., Lbs. Std. Pkg.
26210	$2.35	150, 200	10	8¼	10	21
26212	3.35	300, 500	12	12	5	19½
26214	6.00	750, 1000	14	15⅜	5	27

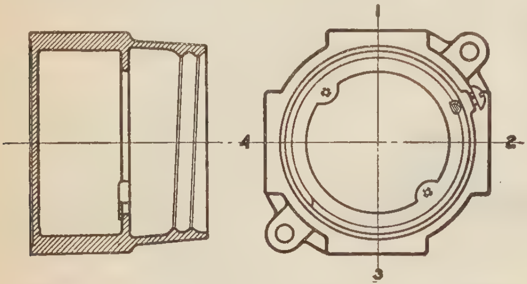
Prices are for reflectors only.

No. 26041 Benjamin Combination Outlet Boxes and Type RR Hoods

This fixture combines a heavy duty cast iron outlet box and Type RR threaded hood with medium base keyless socket. For use with all medium base Type RR and Sturdox reflectors. Recommended for use in locations in which distance between ceiling and reflector must be reduced to minimum in order to provide maximum clearance between reflector and floor.

One-piece molded composition socket base; metal parts not of brass, cadmium-plated; Green paint enameled casting.

Release of two screws permits removal of baffle plate and socket as a unit, which gives access to socket wiring terminals and provides an opening of 2⅝ inch diameter.



Section and Face Plan of Outlet Box-Hood Showing Code Nos. to be Used in Specifying Tapping

Not tapped; can be tapped, at no extra charge, for ½, ¾ or 1-inch conduit, 1, 2, 3 or 4 ways. Use code number shown on diagram to specify location of outlets. For example: No. 1, blank; No. 2, ½″; No. 3, blank; No. 4, ½″.

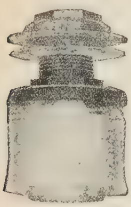
Diameter, 4$\frac{3}{16}$ inches; height, 3$\frac{3}{16}$ inches.

Standard package, 10; shipping weight, 45 pounds.

No. **26041**, without Wires or Lamps............each **$1.75**

Benjamin Sockets for Reflector Fixtures

National Electrical Code Standard



No. 4651

No. 2661

Keyless Medium Base Socket Assembly—Porcelain

660 Watts, 600 Volts

For socket-reflector and hooded store fixtures.

No. 4651 socket assembly is standard equipment on Benjamin Medium Base Socket-Reflectors and hooded store fixtures. Nos. 4650 and 4665 are optional equipment for the same fixtures.

Cat. No.	Each	Size Tapped In.	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4651	**$1.05**	½	Socket with X Type Fitting..	10	9½
4650	**1.05**	⅜	Socket with X Type Fitting..	10	11½
4665	**1.05**	¾	Socket with X Type Fitting..	10	9
88	**.60**	..	Socket Only (No Fittings)....	10	8

Pull Chain Medium Base Socket Assembly Molded Composition

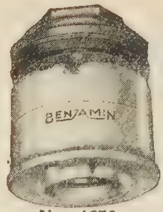
660 Watts, 250 Volts

For socket-reflector equipment, Type RR, Sturdox hoods.

2661	**$1.85**	½	With Stirrup, X Type Fitting.	10	8
2667	**1.85**	⅜	With Stirrup, X Type Fitting.	10	7½
2664	**1.40**	..	Socket with Stirrup Only.....	10	5½

Benjamin Shock Absorbing Sockets

For Reflector Fixtures



No. 4676

Keyless—Medium Base

660 Watts, 600 Volts

This socket is equipped with the Benjamin shock absorber and is designed for replacement on Benjamin lighting equipment. The styles of equipment on which the various sockets are to be used are shown by the group headings.

For Reflector-Socket Equipment

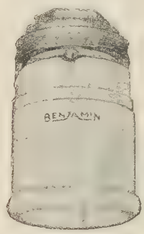
Cat. No.	Each	Tapped Inches	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4676	**$1.15**	½	Socket with X Type Fitting.....	10	8½
4678	**1.15**	⅜	Socket with X Type Fitting.....	10	8½
4677	**1.15**	¾	Socket with X Type Fitting.....	10	8½
4675	**.70**	..	Socket Only, with Spring........	10	3¾
			For Sturdox Hoods and Type RR and Glassteel Pendent Steel Hoods		
4680	**$1.15**	½	Socket with X Type Fitting.....	10	9
4681	**1.15**	¾	Socket, X Type Fitting.........	10	9

Benjamin Shock Absorbing Sockets

For Reflector Fixtures—Keyless—Mogul Base

1500 Watts, 600 Volts

Equipped with the Benjamin shock absorber and designed for replacement on Benjamin lighting equipment.



No. 4670

For Reflector Socket Equipment

Cat. No.	Each	Tapped In.	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4670	**$1.60**	½	With X Type Fitting	10	10½
4672	**1.60**	¾	With X Type Fitting	10	10½
4578	**1.15**	..	Socket Only, with Spring............	10	6⅜
			For Sturdox Hoods and Type RR and Glassteel Pendent Steel Hoods		
4670	**$1.60**	½	With X Type Fitting	10	10½
4672	**1.60**	¾	With X Type Fitting	10	10½

Benjamin Shock Absorbing Sockets

For Reflector Fixtures

Self-Locking—Medium Base

660 Watts, 600 Volts

No. 4548

Equipped with the Benjamin shock absorber and designed for replacement on Benjamin lighting equipment.

This socket locks automatically when a lamp is screwed in. The key must be used to remove lamp.

Key, Cat. No. 1399, is furnished only with an original installation of Benjamin Self-Locking Sockets.

Additional keys may be purchased only on order of an executive officer or member of a firm having such an installation.

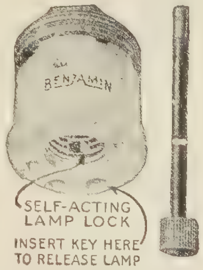
For Reflector-Socket Equipment

Cat. No.	Each	Tapped Inches	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4548	**$1.65**	½	Socket and X Type Fitting......	10	8¾
4549	**1.65**	⅜	Socket and X Type Fitting......	10	8¾
4550	**1.65**	¾	Socket and X Type Fitting......	10	8¾
4551	**1.20**	..	Socket Only, with Spring........	10	4½
1399	**1.00**	..	Key Only.......................	1	⅛
			For All Sturdox Hoods and Type RR Pendent Steel Hoods		
4552	**$1.65**	½	Socket and XR Type Fitting....	10	9¼
4553	**1.65**	¾	Socket and XR Type Fitting....	10	9¼
1399	**1.00**	..	Key Only.......................	1	⅛

Benjamin 2-piece Locking Sockets

Medium Base—660 Watts, 600 Volts

Locks lamp in place automatically without use of key. Key is needed only when a lamp must be withdrawn. No. 586 may be substituted for body of No. 88 sockets now in use without interference with wiring. Locking arrangement grips lamp on attempt to remove.



Nos. 4528 and 1399

For Socket-Reflector, RR Cast Hoods and RR Outlet Box Steel Hoods

Cat. No.	Each	Tapped In.	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4528	$1.55	½	With X Fitting	10	8¾
4529	1.55	⅜	With X Fitting	10	8¾
4530	1.55	¾	With X Fitting	10	8¾
For All Sturdox and RR Pendent Steel Hoods					
4532	$1.55	½	With Fitting	10	8¾
4533	1.55	¾	With Fitting	10	8¾
86	1.10		Less X Fitting, No Key	10	4½
586	.90		Locking Body.	10	3
1399	1.00		Key..........	1	⅛

Benjamin Sockets for Reflector Fixtures

National Electrical Code Standard
1500 Watts, 600 Volts

Keyless Mogul Base Socket Assembly—Porcelain

No. 4657

No. 4515

For Socket-Reflectors, Sturdox Hoods, and Type RR and Glassteel Pendent Steel Hoods

Cat. No.	Each	Size Tapped In.	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4657	$1.50	½	With X Type Fitting...	10	12½
4666	1.50	¾	With X Type Fitting...	10	12
698	1.05	..	Without X Type Fitting.	10	10
4524	.75	..	Socket Body Element Only................	10	8
For Type RR Cast Hoods and Type RR and Glassteel Outlet Box Type Steel Hoods					
4515	$1.05	..	Without X Type Fitting	10	10
4524	.75	..	Socket Body Element Only................	10	8

Benjamin Sockets for Reflector Fixtures

National Electrical Code Standard
660 Watts, 600 Volts

Keyless Medium Base Socket Assembly—Porcelain

For Sturdox hoods and RR and Glassteel pendent steel hoods. Has a universal form of terminal base making possible conversion from medium to mogul base without changing wiring connections. Medium base socket element referred to is No. 4520; mogul base socket element is No. 4524.

Medium socket body element removes and mogul socket body fits on same terminal base, as shown by dotted lines.

Standard package, 10.

No. 4505

Cat. No.	Each	Tapped In.	Description	Std. Pkg.
4505	$1.05	½	With X Type Fitting	10½
4509	1.05	¾	With X Type Fitting	12½
4507	.60	..	Without X Type Fitting.....	9
4520	.30	..	Socket Body Element	5

No. 1263 Benjamin Strain Relief Cord Grips

Consists of brass bushing, threaded ½″, brass nut and washer and rubber stuffing gland. Used as a strain relief cord grip or water-tight cord bushing. For reflector fitting or hood tapped for ½″ conduit entrance. Accommodates cord from ⅜″ to 9/16.″

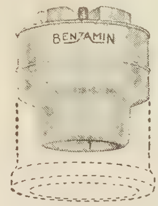
Standard package, 10; weight, 2 pounds.
No. 1263.........................each $.45

Benjamin Sockets for Reflector Fixtures

National Electrical Code Standard
660 Watts, 600 Volts

Keyless Medium Base Socket Assembly—Porcelain

For RR cast hoods and RR and Glassteel outlet box hoods.


No. 4511

Terminal base of this socket has universal feature and conversion from medium to mogul base may be made without changing wiring connections. Medium base socket referred to is No. 4520; mogul base socket element is No. 4524.

Medium socket body element removes and mogul socket body fits on same terminal base as shown by dotted lines.

Cat. No.	Each	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4511	$.60	Without X Type Fitting...	10	8
4520	.30	Socket Body Element Only	10	5

Benjamin Sockets for 3-Light Lamps

1500 Watts, 600 Volts

Keyless Mogul Base Socket Assembly—Porcelain

No. 2590

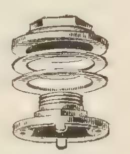
This 2-piece socket can be used in any Benjamin reflector fixture regularly equipped with No. 698 Socket to convert the fixture for use with the 3-light lamps.

Has 2 center contacts and 3 plainly marked wiring terminal screws. Attaching screws are in slotted openings; can be varied from 1½ to 1¾-inch centers. By using adaptor plate listed below, socket can be used in open-type floodlights.

Cat. No.	Each	Tapped Inches	Description	Std. Pkg.	Wt. Lbs. Std. Pkg.
2590	$1.50	..	Socket Only..............	10	10
2591	.20	..	Adapter Plate............	..	..
2592	1.95	½	Socket with X Type Fitting	10	14
2593	1.95	¾	Socket with X Type Fitting	10	14

Type X Benjamin Socket Fittings

For Socket-Reflector Equipment


No. 4653

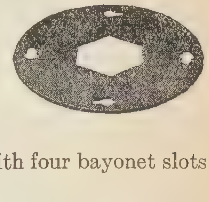
These fittings are made separable for easy wiring.

The fitting consists of two flanges and two washers, one for either side of the reflector. By this method of construction, the socket and lamp are supported directly by the fixture stem, and the reflector is supported independently between the upper and lower flanges. This makes a weatherproof and rigid connection.

Cat. No.	Each	Tapped Inches	Description	Std. Pkg.	Wt., Lbs. Std. Pkg.
4653	$.45	½	X Type Fitting............	10	4¼
4652	.45	⅜	X Type Fitting............	10	4¼
4668	.45	¾	X Type Fitting............	10	4¼

No. 3622 Outlet Box Covers

This outlet box cover is made of galvanized steel.



Designed for use with X Type fittings, for attaching Benjamin Reflector Sockets direct to the conduit box.

The cover is placed between reflector and top flange, and is provided with four bayonet slots which slip over screws on box.

No other fittings are necessary.

Fits 4-inch outlet box.

Cat. No	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
3622	20	8	$.15

Benjamin 1800 Series Separable Hood Reflectors

National Electrical Code Standard

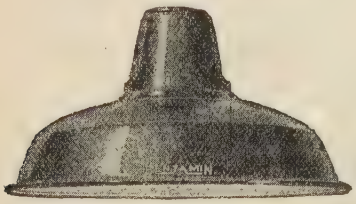
Complete fixtures consist of combinations of the hood and socket units and the reflectors. To obtain price of complete fixture add price of hood and socket to price of reflector selected.

Hoods are designed to take all reflectors interchangeably and to accommodate either medium or mogul base sockets. Hoods are cast iron finished in cadmium plate; reflectors are porcelain enameled, white inside, green outside.

Keyless, one-piece, easy-to-wire, N.E.C. standard porcelain sockets are supplied as standard.

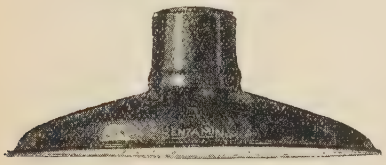
Pull chain socket, medium base only, can be furnished when specified at an advance of 80 cents in list price. When ordering, add suffix "PUL" to Cat. No. of fixture.

Special Dome Reflectors



Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Ht.	Std. Pkg.	Wt. Lbs. Std. Pkg.
1801	$2.20	75, 100	12	6 3/8	10	21
1802	2.40	150	14	7 5/8	10	26
1803	3.00	200	16	8 3/4	10	34
1804	3.70	300, 500	18	10 3/8	5	30

Shallow Bowl Reflectors

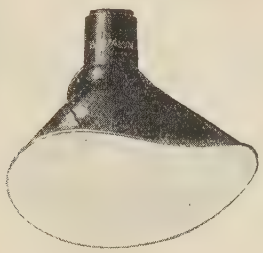


1811	$2.10	50, 60	10	4 5/8	10	18
1812	2.20	75, 100	12	5 7/8	10	22
1813	2.40	150	14	7	10	28
1814	3.00	200	16	8	10	35

Symmetrical Angle Reflectors

1821	$1.10	50, 60	8	7 3/8	10	14
1822	1.10	75, 100	8	8 1/8	10	15
1823	1.40	150	10	10 1/2	10	22
1824	2.85	200	12	12 5/8	10	42
1825	3.35	300, 500	14	14 3/4	5	23

Elliptical Angle Reflectors



1831	$2.40	75, 100	13 1/8	11 7/8	10	30
1832	3.10	150	13 1/8	12 13/16	10	31
1833	3.70	200	16 3/8	13 5/8	10	38

Benjamin 1800 Series Sockets

National Electrical Code Standard

No. 2101 Keyless Medium Base Socket

Standard equipment for medium base Benjamin 1800 Series equipment. One-piece, easy-to-wire; fits any Benjamin 1800 Series hoods shown below.

Standard package, 10; shipping weight, 4 pounds.

No. **2101**.....each **$.60**

No. 2110 Keyless Mogul Base Socket

Standard equipment for mogul base Benjamin 1800 Series equipment. One-piece, easy-to-wire; fits any Benjamin 1800 Series hood shown below.

Standard package, 5; shipping weight, 3½ pounds.

No. **2110**.....each **$1.10**

No. 2102 Pull Chain Medium Base Socket

For use in any medium base Benjamin 1800 Series fixture. Reliable mechanism; in addition to bead chain controlling the mechanism, socket is supplied with a 6-foot pull cord extension. Socket fits any Benjamin 1800 Series hood shown below.

Standard package, 10; shipping weight, 6 pounds.

No. **2102**.....each **$1.40**

Benjamin 1800 Series Separable Hood Fixtures

No. E-18 Pendent Cast Hood

Standard for any Benjamin 1800 Series reflectors and take interchangeably any medium or mogul socket shown above.

Tapped for ½-inch conduit, standard. Cast iron; finished in cadmium plate.

Standard package, 10; shipping weight 8 pounds.

No. **E-18**.....each **$.50**

No. L-18 Angle Cast Hood

Standard for any Benjamin 1800 Series reflectors, where it is desired to have the conduit entrance at right angles to the reflector, and take interchangeably any medium or mogul socket shown above.

Tapped for ½-inch conduit standard. Cast iron; finished in cadmium plated.

Standard package, 10; shipping weight, 9 pounds.

No. **L-18**.....each **$.50**

No. T-18 Feed Through Cast Hood

Standard for any Benjamin 1800 Series reflectors, where it is desired to have the conduit feed through the hood at right angles to the reflector, and take interchangeably any medium or mogul socket shown above.

Tapped for ½-inch conduit, both sides, standard. Cast iron; finished in cadmium plate.

Standard package, 10; shipping weight, 14 pounds.

No. **T-18**.....each **$.65**

No. C-18 Ceiling Cast Hood

Standard for any Benjamin 1800 Series reflectors, and take interchangeably any medium or mogul base socket shown above. Fit any standard 4-inch outlet box. One screw hole in hood is slotted for easy attachment.

Cast iron; finished in cadmium plated.

Standard package, 10; shipping weight, 10 pounds.

No. **C-18**.....each **$.50**

Benjamin Snap-In Attachable Reflector Holders

Attach to Any Benjamin Reflector with 2¼-Inch N Neck

These snap-in holders can be quickly and easily attached to any Benjamin Shade Holder Reflector with 2¼-inch N neck without using tools. To attach, simply line up the rivet heads and crimpings in the collar of the holder with corresponding slots in the neck of the reflector. Then push down on the holder with the palm of the hand. The 4 bronze spring lugs of the holder will snap into position, fastening the reflector and holder securely together.

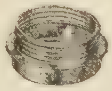
Standard package, 10; shipping weight, 1 pound.

Type W Holder

Threads onto various heavy duty, metal-clad sockets with casings threaded for shade holders such as Bryant No. 4107 and similar G-E, Hubbell, H & H and Arrow sockets. Nickel finish.

No. **4382**..........each **$.15**

Type S Holder



For attachment to Benjamin-Benco sockets and fittings.

Bright metal finish.

No. **4383**.........each **$.15**

Type B Holder

For attachment to standard brass shell sockets.

Natural brass finish.

No. **4384**.........each **$.15**

Type P Holder

For attachment to standard porcelain sockets.

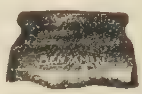
Bright metal finish.

No. **4385**.........each **$.15**

Benjamin Dome Shade Holder Reflectors

Reflector and Lamp Manufacturers' (RLM) Standard

No. 14100N



Type N Shade Holder

Type S Shade Holder

For general illumination when it is desired to avoid reflected glare from the surfaces lighted and to avoid direct glare by having the angle of light cut-off agree with all state lighting codes. Angle of cut-off, 17½ degrees.

Type N Shade Holder Reflector is fitted with a neck so shaped, as to fit any standard 2¼ or 3¼-inch shade holder.

Type S Shade Holder Reflector has a screw threaded holder to fit Benco Sockets and Type S Outlet Box Fittings.

Shade holders are green porcelain enamel outside; white inside.

With Type N Neck for Standard Shade Holder

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Dimen., In. Ht.	Std. Pkg.	Wt., Lbs. Std. Pkg.
14025N	$1.25	25, 40	10	3⅜	10	13½
14050N	1.80	50, 60	12	4⅞	10	19½
14075N	1.90	* 100	12	5½	10	19½
14100N	2.20	150	14	6¾	10	28
14200N	2.60	200	16	7¾	10	36
†14300N	3.60	300, 500	18	7¾	5	29
†14750N	5.30	750, 1000	20	10¾	5	36
With Type S Holder for Benco Sockets and Type S Outlet Box Fittings						
14025S	$1.40	25, 40	10	3⅜	10	13½
14050S	1.95	50, 60	12	4⅞	10	19½
14075S	2.05	* 100	12	5½	10	20½
14100S	2.35	150	14	6¾	10	24
14200S	2.75	200	16	7¾	10	34½

†With 3¼-inch fitter.

*Also takes 75-watt lamps.

Benjamin Bowl Shade Holder Reflectors

No. 12100N

Characteristic Distribution Curve

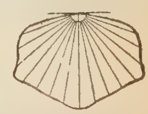
For general illumination where the lighting of flat surfaces is of first importance and where a high intensity is required in a relatively small area.

With Type N Neck for Standard 2¼-Inch Shade Holders

Cat. No.	Each	Size of Lamp Watts	Diam. In.	Ht. In.	Std. Pkg.	Wt. Lbs., Std. Pkg.
12025N	$.95	25, 40	5	3⅜	10	7
12060N	1.50	50, 60	7	4¾	10	12
12075N	1.60	*100	8	6⅛	10	16½
12100N	1.80	150	9	7	10	18½
12200N	2.20	200	10	8	10	19½
With Type S Holder for Benco Sockets and Outlet Box Fittings						
12025S	$1.10	25, 40	5	3⅜	10	7
12060S	1.65	50, 60	7	4¾	10	13
12075S	1.75	*100	8	6⅛	10	17
12100S	1.95	150	9	7	10	18½
12200S	2.35	200	10	8	10	23

Benjamin Shallow Bowl Shade Holder Reflectors

No. 11100N



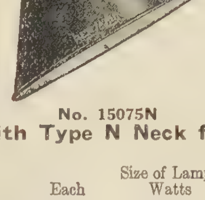
Characteristic Distribution Curve

For general illumination where the lighting requirement is of an extensive character.

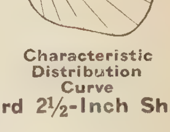
With Type N Neck for Standard 2¼-Inch Shade Holders

Cat. No.	Each	Size of Lamp Watts	Diam. In.	Ht. In.	Std. Pkg.	Wt. Lbs., Std. Pkg.
11050N	$1.25	25, 40	10	3⅛	10	12
11060N	1.45	50, 60	12	4¼	10	17
11075N	1.70	*100	12	5	10	17
11100N	1.90	150	15	6¼	10	21
With Type S Holder for Benco Sockets and Outlet Box Fittings						
11050S	$1.40	25, 40	10	3⅛	10	13
11060S	1.60	50, 60	12	4¼	10	17½
11075S	1.85	*100	12	5	10	17
11100S	2.05	150	15	6¼	10	22½

Benjamin Angle Shade Holder Reflectors



No. 15075N



Characteristic Distribution Curve

With Type N Neck for Standard 2½-Inch Shade Holders

Cat. No.	Each	Size of Lamp Watts	Diam. In.	Wdth. In.	Ht. In.	Std. Pkg.	Wt. Lbs., Std. Pkg.
15040N	$1.15	25, 40	7	6	5½	10	8½
15060N	1.45	50, 60	8	7	6½	10	9½
15075N	1.45	*100	8	7	7⅜	10	11
15100N	1.95	150, 200	10	8⅝	9½	10	20
With Type S Holder for Benco Sockets and Outlet Box Fittings							
15040S	$1.30	25, 40	7	6	5½	10	9
15060S	1.60	50, 60	8	7	6½	10	10
15075S	1.60	*100	8	7	7⅜	10	11½
15100S	2.10	150, 200	10	8⅝	9½	10	21

*Also takes 75-watt lamps.

Benjamin Heavy Duty Gas and Vapor-Proof Fixtures

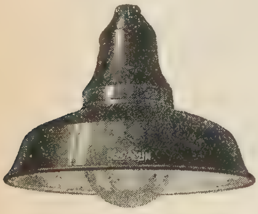
Heavy 2-piece cast hood, porcelain enameled steel threaded reflector, socket and heavy screw globe of clear glass, together with necessary gaskets for sealing fixture.

Hood is regularly tapped ½ inch but may be ordered ¾ inch at no advance in price; also furnished with outlet box hoods for attaching to Benjamin Water-Tight Outlet Boxes.

Hood is threaded to take reflector and neck of reflector in turn has an inside thread which receives the enclosing globe. Finish: hood, green enameled; reflector, green acid-resisting porcelain enamel outside, white inside.

Fixtures Without Reflectors

			With Hood Tapped ½ Inch			With Outlet Box Hood		
Size Lamp Watts	Diam. In.	Std. Pkg.	Cat. No.	Each	Wt., Lbs. Std. Pkg.	Cat. No.	Each	Wt., Lbs. Std. Pkg.
50, 100	5⅛	10	6526	$3.75	64	6576	$4.45	64
150, 200	5⅛	10	6527	4.20	69	6577	4.90	69
300, 500	8	5	6528	5.60	74½	6578	6.30	74½



No. 6501

With Dome Reflector

For general illumination where it is desired to light both upright and flat surfaces; to avoid reflected glare from the surfaces lighted and to avoid glare by having the angle of light cut-off agree with all state lighting codes. Angle of cut-off, 17½ degrees. Prices do not include wires or lamps.

75, 100	12	10	6500	$6.00	87½	6550	$6.70	87½
150	14	10	6501	6.75	93	6551	7.45	93
200	16	10	6502	8.25	99	6552	8.95	99
300, 500	18	5	6503	10.75	102½	6553	11.45	102½

With Flat Cone Reflector

75, 100	14	10	6513	$6.00	92½	6571	$6.70	83
150	16	10	6514	6.75	100	6572	7.45	91
200	18	10	6515	8.25	106½	6573	8.95	100

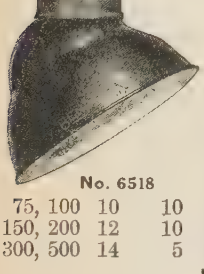
No. 6506

With Bowl Reflector

For general illumination where the lighting of horizontal surfaces is of first importance and where a high intensity is required in a relatively small area.

Prices do not include wires or lamps.

150	9	10	6506	$6.40	86½	6556	$7.10	86½
200	10	10	6507	7.00	91	6557	7.70	91
300, 500	12	5	6508	9.05	92	6558	9.75	92



No. 6518

With Symmetrical Angle Reflector

For lighting vertical surfaces, deep recesses, shelving, bays, etc., where the light must come from the side.

Prices do not include wires or lamps.

75, 100	10	10	6517	$6.50	91½	6567	$7.20	91½
150, 200	12	10	6518	7.25	98	6568	7.95	98
300, 500	14	5	6519	10.00	97	6569	10.70	97

Replacement Parts

Cat. No.	Each	Description	Diam. In.	Std. Pkg.	Net Wt., Lbs. Ea.
1062	$1.20	Globe for 100, 200-Watt Lamps	5⅛	10	⅞
1063	1.60	Globe for 300, 500-Watt Lamps	8	10	2⅝
6535	.10	Asbestos Gasket for No. 1062	4¼	10	1/16
6537	.15	Asbestos Gasket for No. 1063	5½	10	⅛

Benjamin Vapor-Seal Fixtures

For locations such as railroads, foundries, etc.

Dome shape porcelain enameled steel reflector finished green outside, white inside. Copper threads rolled onto reflector neck. Cast aluminum hoods with removable cap carrying socket. Hood carries auxiliary inner reflector of oxidized aluminum. Set screws hold hood onto reflector threads and removable cap onto hood.

N.E.C. standard one-piece porcelain socket with side terminals. Heavy conduit bushing seals wire leads in space between terminal screws and conduit entrance.

Heat-resisting glass cover is held between 2 gaskets. Gaskets cannot fall out when fixture is disassembled.

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Dimen., In. Ht.	Std. Pkg.	Wt., Lbs. Std. Pkg.
5650	$18.00	75, 100	14	9⅜	2	..
5651	20.00	150	14	10¼	2	.
5652	24.00	200	17 5/16	12	2	..
5653	30.00	300, 500	17 5/16	13½	1	..

Prices do not include wires or lamps.

Benjamin Explosion-Proof Lighting Fixtures

For 150 and 200-Watt Lamps

Listed by Underwriters' Laboratories for Class I, Group D hazardous locations—atmospheres containing vapors of gasoline, common petroleum, etc.

Cadmium-plated cast iron hood. Pendent hood tapped ¾-inch standard; ½-inch when specified. Ceiling hood has ears for attaching to ceiling; box has 4-way tapping; 3 outlets with plugs. Tapped ¾-inch standard; ½-inch when specified.

Special sphero-parabolic shape reflector of non-tarnishing aluminum alloy. Aluminum casting fixture body, heavily ribbed. Stippled, heat-resisting cover glass; cast iron holding ring, cadmium-plated.

One-piece porcelain socket, wiring terminals on side.

Cat. No.	Each	Description	Dimen., In. Ht.	Dimen., In. Diam.	Std. Pkg.	Wt., Lbs. Std. Pkg.
*7520	$28.35	Pendent Hood	12⅜	9	1	15½
7521	31.30	Ceiling Hood	13	9	1	19

*For 150-watt lamp, socket extension No. 91 must be used to correctly position lamp in reflector.

Benjamin Sign Reflectors

With Keyless Socket and Lamp Grip

Particularly suited for sign illumination. Projects light sidewards in a long vertical plane as well as directing it to the front.

Reflector is elliptical shaped, Crysteel porcelain enameled steel. Has 2-piece porcelain socket, and heavy separable fitting, with set screw, tapped ½ inch.

Finish, green outside, white inside.

Cat. No.	Size of Lamp Watts	Size Tapped Inches	Dimensions, Inches Width	Dimensions, Inches Diam.	Dimensions, Inches Height	Std. Pkg.	Net Wt. Pounds Each	Price Each
5570	100, 150	½	9¼	13¼	8⅝	9	2½	$3.60
5571	150, 200	½	10	13¼	9	9	2½	4.20

Benjamin Moisture-Proof and Dust-Proof Fixtures

No. 665

No. 657

One-piece, weatherproof copper casing tapped for ½-inch conduit. Fitted with removable, one-piece, easily wired porcelain socket held in place by a retaining ring that threads into casing. Clear glass globe threads into casing and seats against an asbestos gasket. Finish, natural copper.

Without Guard

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Ht.	Std. Pkg.	Wt. Lbs. Std. Pkg.
663	**$2.10**	25, 60	4⅛	7⅝	10	37
665	**2.65**	75, 100, 150	6⅜	9½	10	63

With Guard

Supplied with heavy tinned wire guards which thread onto outside of casings.

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Ht.	Std. Pkg.	Wt. Lbs. Std. Pkg.
657	**$2.75**	25, 60	4½	8	10	44
658	**3.65**	75, 100, 150	8⅛	9⅞	10	72

Globes Only for Replacement

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Fitter	Std. Pkg.	Wt. Lbs. Std. Pkg.
1059	**$.45**	25, 40	3⅜	3	10	10
1060	**.75**	25, 60	3½	4	10	11
1062	**1.20**	75, 100, 150	6	4¼	10	21½
1063	**1.60**	300, 500	8¼	5⅝	5	21½

Benjamin Aluminum Vapor-Proof Projectolites

For lighting service in locations such as railroad round houses, where atmospheric conditions are severe.

Entire body of fixture and cover retaining band are of corrosion-resisting aluminum alloy; exterior is green lacquer. All other exposed metal parts are cadmium-plated.

Without necessitating re-positioning, complete unit can be taken down for easy cleaning and re-lamping on floor.

Unit is sealed against entrance of gases and moisture. There are no openings in reflector neck; all wiring is enclosed with leads from socket terminals passing through gasketed ball type adjustable fitting into connector body.

Adjustable ball joint permits positioning at practically any point through a 180° angle by loosening of holding bolt. A set screw in tapped end of adjustable ball fitting provides a means of lateral positioning.

Connector is 2-pole, water-tight type, polarized; rated 15 amperes, 125 volts; tapped for attachment to ½-inch i.p. Fixture is wired with No. 16 B. & S. gauge asbestos-covered fixture wire from socket terminals to connector plug. Wire leads not supplied.

Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam.	Ht.	Std. Pkg.	Wt., Lbs. Std. Pkg.
5613	**$16.00**	300	12½	12¾	1	11½
5627	**20.00**	300, 500	12½	12¾	1	11½

No. **5622**, Glass Cover for Replacement........each **$5.00**

Benjamin Unit-Package Fixtures

For 75 and 100-Watt Lamps

An efficient, economical means of providing good illumination for outdoor and indoor locations about the home, farm, estate and roadside stand. These fixtures are replacing bare lamps used in such locations, by reducing glare and directing most of light which is wasted by a bare lamp, to floor or ground area which is to be lighted.

Porcelain enameled steel reflector has removable cadmium-plated cast hood and one-piece easy-to-wire medium base N.E.C. standard porcelain socket. Pipe and bracket are galvanized.

Packed complete in an individual shipping carton with a 17½-inch length of ½-inch pipe and cast wall bracket.

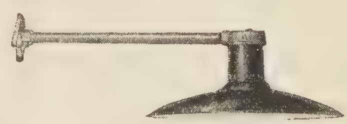
No. 1941 R L M Dome Reflector with Wall Bracket

Diameter of reflector, 12 inches.

Five in standard package; shipping weight, 28½ pounds.

No. **1941**..each **$3.95**

No. 1943 Flat Cone Reflector with Wall Bracket



For yard and general outdoor lighting.

Diameter of reflector, 14 inches.

Five in standard package; shipping weight, 37½ pounds.

No. **1943**..each **$3.50**

No. 1938 Angle Reflector with Wall Bracket

For lighting ground areas from the side and for use with small signs. Diameter of reflector, 8 inches.

Five in standard package; shipping weight, 28½ pounds.

No. **1938**..each **$2.85**

Benjamin Variety-Lites

For 100 and 200-Watt Lamps

For lighting furnace rooms, attics and similar indoor locations; used outdoors for lighting yards, porches, etc.

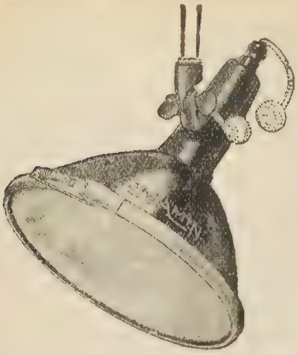
Porcelain enameled steel reflector, green outside, white inside. Light can be directed exactly where wanted by adjustment of hinged-swivel mounting bracket which is controlled by three wing nuts. Bracket is cadmium-plated and enameled red. Porcelain one-piece N.E.C. standard socket.

Completely wired; with 4-foot rubber-covered cord and attaching plug.

Cat. No.	Each	Size Lamp Watts	Diam. Reflector, In.	Std. Pkg.	Wt., Lbs. Std. Pkg.
1930	**$3.20**	100	8	1	4¾
1932	**3.60**	200	10	1	6½

Benjamin Intensifiers

National Electrical Code Standard



A supplementary lighting unit designed to illuminate small areas to higher intensities than furnished by the general illumination.

Reflector bowl is of heavy gauge metal with steel neck which contains keyless socket and focusing apparatus for positioning two different sizes of lamps. Universal adjusting bracket allows horizontal and vertical positioning and is attached to steel neck. Tapped ½-inch i.p. size.

Dust-tight cover consisting of glass disc, felt gasket and steel retaining band seals interior of intensifier.

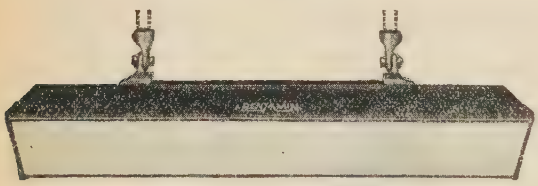
No. 5603 taking an inside frosted 60, 75 or 100-watt lamp is equipped with clear glass cover. No. 5604 taking a clear 150 or 200-watt lamp furnished with etched glass cover. No. 5632, equipped with daylight glass cover, is recommended for work requiring color discrimination.

Outside finish is green paint lacquered. Inside reflecting surface is chromium-plated.

Cat. No.	Each	Lamp Size Watts	Glass Cover	Dimens., In. Diam.	Dimens., In. Ht.	Std. Pkg.	Wt., Lbs. Std. Pkg.
5603	**$11.75**	60–100	Clear	9	11¾	1	6
5604	**15.00**	150–200	Frosted	12	15¾	1	9
5632	**17.25**	150–200	Daylight	12	15¾	1	9

Benjamin Inspection-Lites

For 15 to 100-Watt Lamps



For local lighting of inspection operations on plate glass, sheet glass, tin plate and many other similar materials where it is necessary to look through the material directly into the light source or at the reflection of the light source from polished or shiny surfaces. The qualifications necessary for inspecting glass and polished surfaces make this fixture ideal for showing up surface imperfections in a wide variety of materials such as leathers, coated papers and rubber stock having a sheen or gloss which ordinarily makes inspection difficult.

A one-piece porcelain enameled steel reflector produces uniform brightness over the entire surface of the opal glass cover. Reflector is green outside and white inside. Equipped with two medium base twin sockets.

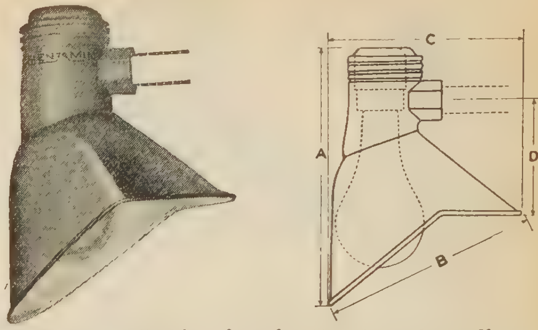
Cover glasses are removable for relamping or cleaning the reflector. Glasses are held tightly in guides by flat bronze springs bearing against them.

Provided with two mounting brackets which are adjustable through an angle of more than 180 degrees making it possible to position the unit at the precise angle necessary for best seeing. Brackets are threaded regularly for ½-inch conduit. Mounting brackets are cadmium-plated. Sockets are N. E. C. standard.

Cat. No.	Each	No. of Lamps	Dimen., In. Length	Dimen., In. Depth	Dimen., In. Height	Std. Pkg.	Ship. Wt., Lbs.
5607	**$20.00**	4	30	6¾	9	1	28
5608	**26.00**	6	48	6¾	9	1	39

Benjamin Bulletin Reflectors

For Intensive Lighting of Small Rectangular and Straight Top Signs



Particularly effective for the lighting of small rectangular signs, long, narrow ridge signs, transom signs, etc.

The distribution of this type of unit is unusually efficient, with a broad spread at top. Sign will be uniformly lighted clear to top and all along top edge. Lamp is close in to inside rear surface of reflector, which means a short cut-off behind reflector and high intensity of reflected light on the sign surface.

The body, with reflector, can be screwed to straight horizontal conduit, aluminum threaded cap removed, socket lifted out, wires fished through conduit and attached to terminals. Socket is then shoved down into place, and cap screwed on. Special shape reflector is porcelain enameled steel, green outside, white inside.

Hood is cast iron, cadmium-plated with threaded side outlet. One-piece porcelain socket, N. E. C. standard.

Tapping: ½ inch standard; ¾ inch when specified.

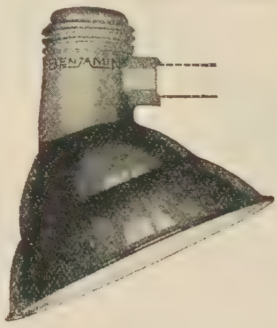
Cat. No.	Each	Size Lamp Watts	Dimen., In. Diam. B	Dimen., In. Diam. C	Dimen., In. Ht. A	Dimen., In. Ht. D	Std. Pkg.	Wt., Lbs. Std. Pkg.
5731	**$2.40**	50, 60	6	5¼	7¾	2¾	10	24
5732	**2.50**	75, 100	7	6¼	8½	3¾	10	28

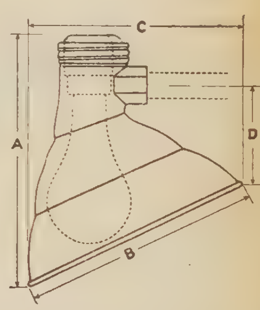
Prices do not include wires or lamps.

Benjamin Emblem Reflectors

For Intensive Lighting of Circular Emblem and Other Small Signs

National Electrical Code Standard





For lighting circular emblem signs of the type popularly used around automobile service and gasoline filling stations and other similar small signs.

Removable threaded aluminum cap gives easy access to wiring terminals on socket and cuts down cost of installation and wiring.

Conduit is led straight into side outlet of reflector hood. Hood, with reflector, is screwed to conduit, aluminum cap removed, socket lifted out, wires brought through and attached to terminals. Socket is then replaced in hood and cap screwed on.

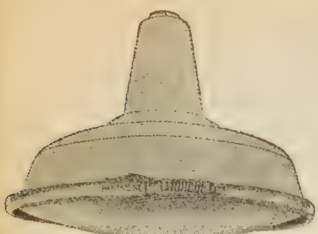
Cast iron hood is cadmium-plated, with side outlet tapped for ½-inch standard ¾-inch when specified.

One-piece porcelain socket, N.E.C. standard, with easily accessible terminal screws.

Symmetrical design reflector, is porcelain enameled steel green outside, white inside.

Cat. No.	Each	Size Lamp Watts	Dimen., In. Ht. A	Dimen., In. Diam. B	Dimen., In. Diam. C	Dimen., In. Ht. D	Std. Pkg.	Wt., Lbs. Std. Pkg.
5701	**$2.20**	50, 60	9¼	8	6⅞	2½	10	26
5702	**2.20**	75, 100	8	8	7⅜	3½	10	30

Benjamin Dust-Tight Glass Covers



A light weight, economical device that will give the reflecting surfaces of Benjamin Industrial Lighting Equipment protection against dust and dirt.

It will give satisfactory service in the average industrial locations where fixtures are exposed only to the dust and dirt of manufacturing operations. It is not recommended for installation where it will be subjected to acid or alkali fumes, excessive heat or continuous exposure to steam, etc.

Designed for Benjamin Reflector Equipment only. No assurance is given that it will fit other reflectors.

The cover consists of a circular felt gasket, clear glass disc and a one-piece steel retaining band, cadmium finished, having a locking lever with a compression spring.

It is easily attached—the locking lever is first released, which expands the band to its greatest diameter. Then the band is hooked over the reflector bead and the cover pushed up until the band engages the entire edge, after which locking lever is snapped into closed position.

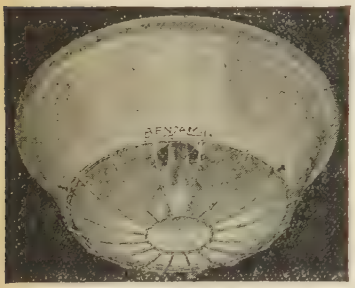
The locking lever with compression spring gives positive tension on the band of the cover at all times. It is virtually impossible for the cover to work itself loose.

The cover in most cases weighs less than the reflector and is easily handled.

Cat. No.	Description	Std. Pkg.	Net Wt. Lbs., Each	Price Each
6408	Cover for 8-Inch Reflector	5	1	$3.10
6409	Cover for 9-Inch Reflector	5	1¼	3.20
6410	Cover for 10-Inch Reflector	5	1½	3.30
6412	Cover for 12-Inch Reflector	5	2	3.75
6414	Cover for 14-Inch Reflector	5	2¼	4.25
6416	Cover for 16-Inch Reflector	5	3	5.00
6418	Cover for 18-Inch Reflector	5	4¼	5.75
6420	Cover for 20-Inch Reflector	5	4¾	9.50

Benjamin Gymnasium Fixtures

With RLM Dome Reflector



A completely guarded RLM fixture of good appearance, for locations where the lighting fixtures are subjected to frequent jars and hard knocks. Suitable for gymnasiums, indoor baseball courts, volley ball courts, indoor sport arenas, etc.

Special features of this fixture are: longer life; good illumination over horizontal and vertical surfaces; easy lamp removal—large opening in bottom of guard permits passage of lamp; easy cleaning; and attractive appearance.

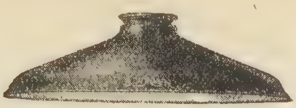
Each unit consists of heavy gauge steel canopy and wire guard, medium or mogul base keyless socket, Reflector and Lamp Manufacturers' standard dome reflector, and four steel straps for attaching to ceiling. Canopy attaches to straps by means of four large machine screws which are furnished.

Steel canopy and wire guard are white paint enameled. Reflector is white porcelain enameled steel.

For 200-Watt Lamps

Cat. No.	Description	Over-All Dimen. Inches Diam.	Over-All Dimen. Inches Depth	Reflector Diam. Inches	Std. Pkg.	Net Wt. Lbs. Each	Price Each
6300	With Medium Base Receptacle	24	9$\frac{3}{16}$	16	1	10	$11.00
6302	Less Medium Base Receptacle	24	9$\frac{3}{16}$	16	1	10	10.80
	For 300-500-Watt Lamps						
6301	With Mogul Base Receptacle	24	13½	18	1	11	$15.00
6303	Less Mogul Base Receptacle	24	13½	18	1	11	13.85

Benjamin Shallow Bowl Reflectors



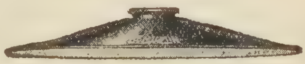
No. H416, 16-Inch

Benjamin standard finished, porcelain enameled steel reflectors, green outside, white inside, with heel to fit standard shade holders.

Cat. No.	Size, Inches Reflector	Size, Inches Fitter	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
H410	10	2¼	10	7	$.95
H412	12	2¼	10	13	1.15
H414	14	2¼	10	15	1.50
H416	16	3¼	10	19	1.90

Benjamin Flat Cone Reflectors

With Heel to Fit Standard Shade Holders

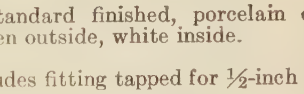


No. H515, 15-inch

Benjamin standard finished, porcelain enameled steel reflectors, green outside, white inside.

Cat. No.	Size, Inches Reflector	Size, Inches Fitter	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
H510	10	2¼	10	6	$.90
H512	12	2¼	10	10	1.15
H515	15	3¼	10	12	1.65

Benjamin Flat Cone Reflectors



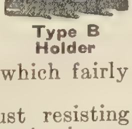
No. H15, 15-inch

Benjamin standard finished, porcelain enameled steel reflectors, green outside, white inside.

Fixture includes fitting tapped for ½-inch iron pipe stem.

Cat. No.	Size, Inches Reflector	Size, Tapped Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
H10	10	½	10	7	$1.00
H12	12	½	10	12	1.25
H15	15	½	10	16	1.65

No. 12061B Benjamin Bowl Reflectors



Type B Holder

Reflector with N Neck Shown for Shape Only

No. 12061B concentrates the light on a horizontal plane over a small area directly below the reflector and is used for lighting work tables, benches and similar objects on which fairly close work is carried on.

Construction is of rust resisting iron into which is fused Benjamin porcelain enamel to make an everlasting surface. Finish is green outside, white inside. Furnished only with B holder for attachment to standard brass shell sockets.

Cat. No.	Size Lamp Watts	Diameter Reflector Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
12061B	50, 60	7	10	12	$1.35

Benjamin Sewing Machine Reflectors

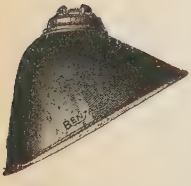
No. 31002B

The Benjamin Sewing Machine Reflector is for localized lighting in connection with power sewing machines. Light is directed right where it is needed. Usually it is best to attach the reflector to a Benjamin Angle Socket, which in turn is supported by whatever supporting fixture the particular conditions necessitate. No. 31002B is paint enameled steel, finished green outside and aluminized inside.

No, 31012B is porcelain enameled, white inside, green outside.

Cat. No.	Size, Lamp Watts	Dimensions, Inches Diameter	Dimensions, Inches Height	Std. Pkg.	Wt., Lbs Std. Pkg.	Price Each
31002B	15 to 25	3⅝	4	10	2½	$.60
31012B	15 to 25	3⅝	4	10	2½	.90

No. 15061B Benjamin Symmetrical Reflectors Angle



No. 15061B Reflector projects the light to the front as well as to the side and is used for illuminating post-office sorting racks, shelving, rows of books, and storage bins.

It directs the light on the working planes that need illumination, and eliminates the direct glare caused by bare lamps.

Reflector is durably constructed of rust resisting iron into which is fused the Benjamin porcelain enamel. Finish is green outside, white inside. Equipped with a built-in holder for attachment to all standard brass shell sockets.

Cat. No.	Size Lamp Watts	Diameter Reflector Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
15061B	60	8	10	11	$1.40

No. 5045 Benjamin Brass Chain Suspensions

With Canopy, ⅜-Inch Hickey and ½-Inch Loop

Finish, brushed brass.

Cat. No.	Length Inches	Canopy Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each	Extra Chain Price per Ft.
5045	14	5x4	10	....	$2.30	$.35

Benjamin Iron Pipe Stems

No. 6008

No. 5063

No. 5064

All iron parts are galvanized.

Without Fittings

Cat. No.	Length Inches	Pipe Size Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each	Extra Length Price per Ft.
6008	8	½	10	....	$.35	$.35
6009	12	⅜	10	....	.30	.30
***With No. 6029 Fitting**						
*5063	8	½	10	12½	$1.15	$.35
With No. 6031 Fitting						
5064	8	½	10	13¾	$1.30	$.35

For stem with shock absorber fitting, No. 6030, add 10 cents.

Benjamin Locking Ceiling Guards

Has hinge and fastening plate opposite hinge; attached by screws. For brass padlock, 2 keys, add 65 cents.

Heavy steel wire, tinned. Fittings are galvanized.

Cat. No.	Size, Inches Diam.	Size, Inches Depth	Std. Pkg.	Price Each
1350	10	7	10	$1.60
1352	12	8	10	2.00
1354	14	9	10	2.50
1356	16	6¾	10	2.80
1358	18	8¾	10	3.50
1360	20	11	10	4.00

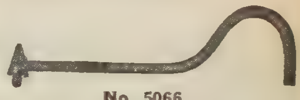
No. 6180 Benjamin Iron Mast Arms

Furnished with chains. Mast arms furnished up to 10 feet in length.

Cat. No.	Std. Lgth. Inches	Fitting Inches	Size Pipe Inches	Std. Pkg.	Price Each	Price Extra Length per Ft.
6180	36	¾x½	¾	10	$3.50	$.80

Benjamin Iron Goosenecks

With Wall Fitting



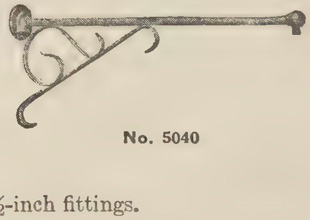
No. 5066

Gooseneck, No. 5066 is regularly furnished with wall fitting No. 5026, but may be furnished if specified, with pole fitting No. 5025. Cat. No. 5067 includes wall fitting No. 5027.

Cat. No.	Standard Length Inches	Size Pipe Inches	Std. Pkg.	Price Each
5066	30	½	10	$.95
5067	40	¾	10	1.65
Without Fitting				
5036	30	½	10	$.60
5037	40	¾	10	1.00

All iron parts are galvanized finish.

Benjamin Iron Brackets



No. 5040

With ¾x½-inch fittings.

Cat. No.	Std. Length Inches	Description	Size Pipe Inches	Std. Pkg.	Price Each
5038	40	Less Brace.. ...	¾	10	$2.50
5040	40	Complete	¾	10	4.00
6186	..	Ball Fitting Only	¾x½	10	.55

Benjamin Aligners with Shock Absorber

Outlet Box Cover Type

Nos. 3366 to 3369, inclusive, have shock absorbing feature and flexible knuckle, permitting fixture to hang plumb. Fitting is supported by a cover of cast iron or steel which fastens to standard 4-inch outlet boxes and Benjamin Marine Junction Boxes as listed. Finish is galvanized.

No. 3366

Cat. No.	Each	Cover	For Box	Size Tapped In.	Std. Pkg.	Wt. Lbs. Std. Pkg.
3366	$.65	Steel	Std. 4-Inch	½	10	5
3367	.65	Steel	Benjamin Marine	½	10	5
3368	1.00	Cast	Std. 4-Inch	½	10	12¼
3369	1.00	Cast	Benjamin Marine	½	10	12¼

No. 3380 Benjamin 45-Degree Ball Fixture Aligners

Outlet Box Cover Type

Consists of a cast iron ball which is mounted between 2 riveted steel plates. Ball is tapped for ½-inch iron pipe size. Has hexagon neck for gripping and holding ball when iron pipe is screwed in. Aligner tapped ½ inch. For standard 3¼ and 4-inch boxes.

Permits fixture to hang plumb and protects fixture against mechanical jars and shocks.

Attaches to standard box by means of 2 screws. Slot in cover of aligner eliminates necessity of removing more than one screw. Just remove one screw, back up other, slip aligner in place and replace screw. Tighten both screws to hold aligner in position. Finish, electro galvanized.

Standard package, 10; weight, 6½ pounds.

Price, No. 3380 ..... each $.30

Benjamin Weatherproof Cable Suspension Fittings

Designed for quick, easy hanging of reflectors from messenger cables.

The hook and clamp construction of the fittings makes it possible to attach the reflectors to the cable with unusual speed and a minimum of effort. Permanent anchorage is assured without the use of any loops or wire clamps and rigidness of suspension is greatly increased.

With Cross Arm

This type fitting is equipped with a cross arm having porcelain knobs at each end for supporting current carrying wires. Iron parts galvanized finish.

Cat. No.	Each	Tapped Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
6036	$1.65	½	10	22
6037M	1.75	½ (Male)	10	22

Without Cross Arm

The cable suspension fitting without cross arm is similar in other respects to the above type. Iron parts galvanized.

Cat. No.	Each	Tapped Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
6038	$.95	½	10	15
6039M	1.05	½ (Male)	10	15

Benjamin Shock Absorber Cross Arms

No. 6202

Cat. No.	Description	Size Tapped In.	Std. Pkg.	Wt., Lbs. Std. Pkg.	Price Each
6202	With Shock Absorber	½	10	14	$1.40
6200	Without Shock Absorber	½	10	13	1.30

No. 5625 Benjamin Oxidized Aluminum Bowl Shades

This is an oxidized aluminum shade holder unit of concentrated distribution.

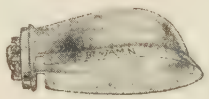
It can be attached to any standard brass shell socket, whether of bead type, Uno-thread or combination bead and thread type.

By adjusting the straps which attach the holder to reflector, in the slots provided, and by changing the position of the holder on the socket shell, the unit will accommodate any size lamp from 25 to 60 watts.

The shade is finished in dull green lacquer outside; oxidized aluminum inside. Straps and holder are cadmium-plated.

Cat. No.	Each	Lamp Watts	Std. Pkg.	Wt., Lbs. Std. Pkg.
5625	$2.20	25 to 60	20	24

Benjamin Pear Shaped Half Shades



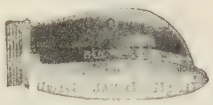
For use with desk lamps, bracket lamps, oil gauge lamps, etc.

Fits standard brass shell sockets and takes Mazda lamps up to 60 watts.

The inside is aluminized; outside as indicated in the listing.

Cat. No.	Description	Std. Pkg.	Shipping Wt., Lbs. Std. Pkg.	Price Each
362	Brushed Brass	20	4	$.88
364	Brass, Polished Nickel	20	4	1.05
365	For Brass Shell Socket; Steel, Green Enameled	20	4	.48
365P	For Porcelain Sockets; Steel, Green Enameled	20	4	.53

Benjamin Weatherproof Half-Shades



No. 367

For lighting oil pumps and gauges around gasoline and oil service stations.

No. 367 is of steel, with aluminum ring which is threaded to fit any style Benco socket, and takes Mazda B lamps up to 40 watts. The reflector and ring are held together by friction, permitting adjustment of reflector after ring is tightly screwed into socket.

Reflector is green paint enamel outside and aluminized inside. Also furnished yellow, red, or other colors at special quotations.

Cat. No.	Each	Description	Std. Pkg.	Wt. Lbs. Std. Pkg.
367	$.45	Reflector only	20	1¾

Benjamin Tubular Half Shades

For use with desk lamps, bracket lamps, oil gauge lamps, etc.

Fits standard brass shell sockets and takes T-10 Tubular lamp.

Reflector has hinged collar which allows it to swing out and give free access to the lamp when making replacement.

Aluminized inside; outside as indicated in listing.

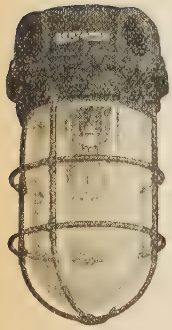
Cat. No.	Description	Std. Pkg.	Shipping Wt., Lbs. Std. Pkg.	Price Each
277	Polished Nickel	20	4	$.70
278	Steel, Green Enameled	20	4	.60

Benjamin Heavy Duty Water-Tight Fixtures

Ceiling Fixtures

With Screw Globe and Guard

For 60, 100 and 150-Watt Lamps



No. 6800

STRUCTURE.—Standard junction box; in brass, No. 6900 keyless; in iron, No. 6901 keyless. Box with mounting lugs, at extra cost. Brass globe-holding ring No. 6990 for 60, 100-watt; No. 6865 for 150-watt; threaded for attachment of globe and guard. Ring attached to box by 4 screws. Rubber gasket No. 6945 seals joint between box and ring. Keyless receptacle No. 6959; key No. 6968. Base is of high heat molded composition. Brass guard, No. 6991 for 60, 100-watt; No. 6868 for 150-watt; screws on outside of globe-holding ring. No. 6992 clear screw globe for 60, 100-watt; No. 6867 for 150-watt. Roughed inside ruby or green glass globe may be specified on 60, 100-watt fixtures. No. 6948 rubber gasket for 60, 100-watt; No. 6866 for 150-watt; seals globe and ring. Standard box is regularly furnished not tapped for conduit entrance. Specify tapping.

FINISH.—Brass parts regularly unfinished; can be finished in dead black. Iron parts are dead black.

Cat. No.	Each	Size Lamp Watts	Kind of Box	Type of Receptacle	Wt., Lbs. Each
6800	**$6.00**	*60, 100	Brass	Keyless	4⅛
6801	**5.20**	*60, 100	Iron	Keyless	4⅛
6804	**7.85**	150	Brass	Keyless	5½
6805	**7.05**	150	Iron	Keyless	5½

*Also takes 75-watt lamps.

Drop Fixtures

For 60, 75 and 100-Watt Mazda Lamps

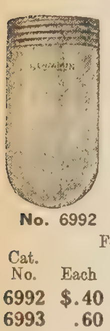
STRUCTURE.—Brass body, No. 6896 keyless. Threaded to receive globe and guard. Keyless receptacle No. 6959; key No. 6968. Base of high heat molded composition. Brass guard No. 6991 threaded to fit outside of body. No. 6992 globe. Roughed inside, ruby or green glass may be specified. Rubber gasket No. 6948 seals globe and bracket body. Body furnished tapped at top for ½-inch iron pipe.

FINISH.—Brass parts regularly unfinished; finished dead black when specified.

Cat. No.	Each	Kind of Body	Type of Receptacle	Wt., Lbs. Each
6830	**$5.10**	Brass	Keyless	3⅛

Benjamin Screw Globes

Navy Standard Thread



No. 6992

Heavy glass screw globes fit interchangeably on all Benjamin Heavy Duty Watertight Fixtures and Hand Portables.

The ruby is genuine colored glass, known as a low visibility color.

Cat. No.	Each	For Lamp Size Watts	Kind of Glass	Over All Dimensions Inches Height	Width	Net Wt., Lbs.
6992	**$.40**	75, 100	Clear	*6$\frac{11}{16}$	3$\frac{5}{16}$	1
6993	**.60**	75, 100	Crystal, Roughed Inside	*6$\frac{11}{16}$	3$\frac{5}{16}$	1
6995	**2.00**	75, 100	Ruby, Navy Standard	*6$\frac{11}{16}$	3$\frac{5}{16}$	1
6997	**2.00**	60, 100	Green	6$\frac{11}{16}$	3$\frac{5}{16}$	1
6867	**.90**	150	Clear	†8$\frac{5}{16}$	4	1⅝
7008	**1.25**	60, 100	Heat-Resisting	6$\frac{11}{16}$	3$\frac{5}{16}$	1

Including screw thread: *1$\frac{1}{16}$″ high; †¾″ high.

Benjamin Heavy Duty Water-Tight Angle Wall Fixtures

With Screw Globe and Guard

For 60, 75 and 100-Watt Mazda Lamps

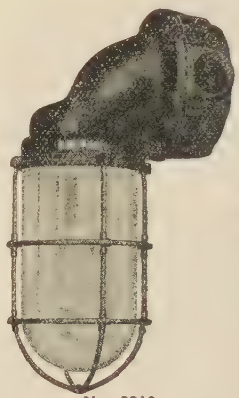
With 1-Piece Angle Body

STRUCTURE.—One piece 90-degree angle bracket body of brass; keyless No. 6882. Body has 2 mounting lugs and is threaded to receive globe and guard. Keyless receptacle, No. 6959. Base of high heat molded composition. No. 6991 brass guard threaded to fit outside of bracket body. Clear screw globe with navy standard thread, No. 6992. Roughed inside, ruby or navy blue globe specify. No. 6948 rubber gasket seals globe and bracket body: Regularly not tapped. Body has 3 bosses which may be tapped for ½-inch conduit entrance from either side or from top. A ½-inch conduit entrance may also be tapped in back of body. Specify tapping; no charge for tapping when location and number of conduit entrances are given with order.

FINISH.—Brass parts, unfinished; finished dead black when specified.

Cat. No.	Each	Kind of Body	Type of Receptacle	Wt., Lbs. Each
6808	**$6.10**	Brass	Keyless	3½

With 1 and 2-Piece Angle Bodies



No. 6810

STRUCTURE.—One or two-piece 90-degree angle bracket bodies; one-piece body—brass, No. 6888 keyless, iron, No. 6889 keyless. Two-piece—angle bracket body consists of angle bracket; brass, No. 6894; iron, No. 6895; fixture body, keyless, No. 6896. Both types furnished with standard water tight junction box; in brass, No. 6900; in iron, No. 6901. Rubber gasket No. 6945 seals joint between box and bodies. Receptacle base of high heat molded composition; keyless, No. 6959. Heavy brass guard No. 6991 is threaded to fit outside thread of bracket body. Clear screw globe with navy standard thread, No. 6992, regularly supplied. Roughed inside, ruby or glass globe may be specified. Rubber gasket No. 6948 seals globe and bracket body. Standard box is regularly furnished not tapped for conduit entrance; specify tapping.

FINISH.—Brass parts, unfinished; finished in dead black when specified. Iron parts are standard dead black.

Kind of Body	With 1-Piece Body Cat. No.	Each	Wt., Lbs. Each	With 2-Piece Body Cat. No.	Each	Wt., Lbs. Each
Brass	**6810**	**$8.50**	6⅜	**6820**	**$8.70**	5⅝
Iron	**6811**	**5.70**	6⅜	**6821**	**7.00**	5⅝

No. 6848 Benjamin Water-Tight Fixtures

With 30-Degree Angle Reflector

For 150-Watt Mazda Lamps

Heavy cast iron hood tapped for ½-inch iron pipe, porcelain receptacle with lamp grip. Threaded copper holder receives screw globe and 2 gaskets make fixture gas and water tight. Reflectors are of steel, porcelain enameled, finished white inside; without lamp.

FINISH.—Reflector, green enameled outside, black bead. Iron hood is green paint enameled.

Diameter reflector, 16 inches.
Weight each, 6¼ pounds.
No. 6848 ....each **$9.25**

No. 6896 Benjamin Drop Fixture Bodies

Heavy cast brass body is supplied tapped ½ inch for use with Benjamin drop fixtures and 2-piece wall fixtures.

Provided with outside thread to receive protecting guard and inside thread for standard globe.

Regularly unfinished; can be finished in dead black when specified.

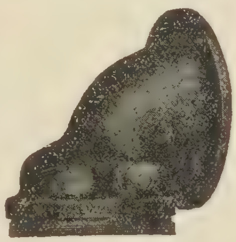
Weight, 2 pounds.

No. **6896**, without Plunger Key..................each **$2.00**

No. 6888 Benjamin 90-Degree Brass Angle Bracket Bodies

For 1-Piece Bulkhead or Wall Fixtures

Heavy cast brass body has outside thread to receive protecting guard and inside thread for standard screw globe.



Four holes, which take No. 10-24 screws, are provided for attaching to outlet boxes, 4½ inches in diameter.

Regularly furnished unfinished, but can be finished in dead black when so specified.

Weight, 3½ pounds.

Cat. No. **6888**, Less Plunger Key................each **$4.00**

Benjamin 90-Degree Angle Wall Brackets

For 2-Piece Wall Fixtures

Heavy cast fittings have ½-inch male thread for connection to body of Benjamin 2-Piece Wall Fixtures Nos. 6820-6827.

Fittings are provided with 4 holes which take Nos. 10-24 screws for attaching to bulkhead, or to all outlet boxes 4½ inches in diameter.

Brass fittings are regularly unfinished, but can be finished in dead black when specified. Iron fittings are dead black.

Cat. No.	Material	Net Weight Pounds	Price Each
6894	Brass	1	**$1.70**
6895	Iron	1	**.80**

Benjamin Threaded Globe Holding Rings

Cast brass rings for use in connection with heavy duty water-tight fixtures; regularly unfinished but can be finished in dead black. Ring has outside thread to receive protecting guard and inside thread for globe.

Cat. No.	For Fixtures Watts	Net. Wt. Lbs.	Price Each
6990	75, 100	11/16	**$1.50**
6865	150	¾	**1.80**

Benjamin Protecting Guards

A brass guard which screws on outside of globe holding ring or fixture body. Used on Benjamin Heavy Duty Water-tight Fixtures and Hand portables. Finished in dead black.

Cat. No.	Fixtures Watts	Net Wt. Lbs.	Price Each
6991	60, 100	11/16	**$2.00**
6868	150	1	**3.00**

R & S Vapor, Gas and Dust-Proof Fixtures

Screw Globe Type

These fixtures are designed for use in places where dampness, dust, combustible gases or corrosive vapors exist; such as for marine use, out-door use, oil refineries, grain elevators, mines, gas and chemical plants, etc.

They are so constructed that, should the protecting globe accidentally be broken, the fixture body will remain air-tight preventing vapors from entering the conduit line. Fixtures are made in cast iron (electro galvanized), cast brass and cast aluminum alloy.

Specifications

Brass fixture bodies—standard finish is black oxidized throughout; special finishes upon request.

Iron fixture bodies—standard finish is electro galvanized.

Aluminum fixture bodies and guards—standard finish is natural aluminum color.

Reflectors are made of heavy steel, porcelain enameled green outside, white inside.

Guards are heavy gauge brass round wire, mounted on threaded brass ring; standard finish, black oxidized.

All globes are made of best American flint glass and guaranteed true to size. Only natural colored glass is used. Seating surfaces are ground true and smooth.

High grade cloth inserted rubber gaskets are furnished as standard equipment. Gaskets of other material will be supplied on request.

Receptacles are moulded composition, with shell moulded in base to provide for air-tight condition even though the globe should become broken.

Maximum size of conduit, ¾ inch. When ordering, specify outlets required.

R & S Pendent Type Vapor-Proof Fixtures

With RLM Reflectors

Fixtures are complete with RLM reflector. They are furnished with or without guard.

			Without Guard			With Guard		
Watts	RLM Reflector In.	Material	Cat. No.	Wt. Lbs.	Price Each	Cat. No.	Wt. Lbs.	Price Each
25–60	12	Brass	**6201**	4	**$7.45**	**6202**	4½	**$9.60**
100–150	14	Cast Iron	**6303**	6¼	**8.60**	**6304**	7¾	**11.30**
100–150	14	Brass	**6203**	6¼	**10.80**	**6204**	7¾	**13.50**
200	16	Cast Iron	**6305**	7¼	**9.20**	**6306**	8¾	**11.90**
200	16	Brass	**6205**	7¼	**11.40**	**6206**	8¾	**14.10**
300	18	Cast Iron	**6307**	11	**13.20**	**6308**	13	**16.50**
300	18	Brass	**6207**	11	**15.35**	**6208**	13	**18.65**

R & S Junction Box Type Vapor-Proof Fixtures

With RLM Reflectors

These fixtures are mounted on iron or brass junction box and are fitted with RLM reflectors.

			Without Guard			With Guard		
Watts	RLM Reflector In.	Material	Cat. No.	Wt. Lbs.	Price Each	Cat. No.	Wt. Lbs.	Price Each
25–60	12	Brass	**6211**	5¾	**$7.45**	**6212**	6½	**$9.60**
100–150	14	Cast Iron	**6313**	8	**8.60**	**6314**	9½	**11.30**
100–150	14	Brass	**6213**	8	**10.80**	**6214**	9½	**13.50**
200	16	Cast Iron	**6315**	8½	**9.20**	**6316**	10	**11.90**
200	16	Brass	**6215**	8½	**11.40**	**6216**	10	**14.10**
300	18	Cast Iron	**6317**	14	**13.20**	**6318**	16	**16.50**
300	18	Brass	**6217**	14	**15.35**	**6218**	16	**18.65**

R & S Ceiling Vaporproof Fixtures

Screw Globe Type

Equipped with No. 118 receptacles, so mounted that base of fixture and conduit system remains vaporproof, even though globe should become broken. All fixtures are complete with clear globe and brass guard, black oxidized.

Cat. No.	Each	Max. Lamp Watts	Material and Finish	Wt. Lbs.
*5090	$4.80	60	Brass, Blk. Oxid.	2½
†5093	5.40	60	Brass, Blk. Oxid.	3
*6335	5.90	200	Iron, Galvanized	5¾
*5091	8.40	200	Brass, Blk. Oxid.	5¼
†6336	6.50	200	Iron, Galvanized	5¾
†5094	9.00	200	Brass, Blk. Oxid.	5¼

*Fit No. 333 cast iron or No. 332 cast brass junction boxes.

†Special mounting; fit 4-in. diam. stamped steel boxes which are installed and cannot be replaced by watertight boxes.

R & S Pendent Vaporproof Fixtures

Screw Globe Type

With clear globe; brass guard, black oxidized. Keyless fixtures equipped with No. 118 receptacle. Maximum conduit, ¾ inch; specify size when ordering.

No. 5000

Without Switch

Cat. No.	Each	Bodies	Max. Lamp Watts	Wt. Lbs.
5000	$5.40	*Brass	60	3
6324	6.50	†Iron	100–200	6
5001	9.00	*Brass	100–200	5½
6328	11.10	†Iron	300 (Mogul Base)	8
1413	13.20	*Brass	300 (Mogul Base)	8½
With Switch				
430	$7.50	*Brass	60	3½
With Side Feet				
5005	$5.70	*Brass	60	3¼
5006	12.00	*Brass	100–200	5½

†Galvanized. *Black oxidized.

R & S Junction Box Vaporproof Fixtures

Screw Globe Type

Fixtures are complete with clear globe, brass guard and type are mounted on iron junction box No. 333; if desired, with brass box No. 332, add $1.30 to price.

Keyless fixtures equipped with No. 118 receptacle.

Iron fixtures and boxes, galvanized; brass fixtures and guards, black oxidized.

Maximum conduit, ¾ inch.

No. 5045

Without Switch

Cat. No.	Each	Material	Max. Lamp Watts	Approx. Wt. Lbs.
5045	$5.40	Brass	60	4
6334	6.50	Iron	100–200	7¾
5047	9.00	Brass	100–200	7¼
6338	11.10	Iron	300 (Mogul Base)	8½
1414	13.20	Brass	300 (Mogul Base)	8¼
With Switch				
431	$7.50	Brass	60	5¼

R & S 90° Wall Bracket Vaporproof Fixtures

Screw Globe Type

Complete with clear globe; brass guard, black oxidized. Mounted on iron junction box No. 333; with brass box No. 332, add $1.30. Maximum conduit, ¾ inch; specify size and location of outlets when ordering.

Keyless fixtures equipped with No. 118 receptacles, so mounted that base of fixture and conduit system remains vaporproof even though globe should be broken.

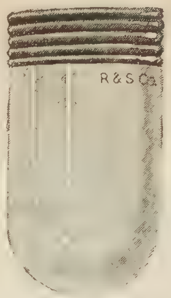
Type G

Type G—Without Switch

Cat. No.	Each	Material	Max. Lamp Watts	Wt. Lbs.
5060	$7.20	*Brass	60	6
6300	9.00	†Iron	100–200	10
5062	12.60	*Brass	100–200	9½
Type GS—With Switch				
434	$8.80	*Brass	60	6½

†Galvanized. *Black oxidized.

R & S Screw Type Glass Globes



Made of best American Flint glass and guaranteed true to size. Only natural colored glass is used.

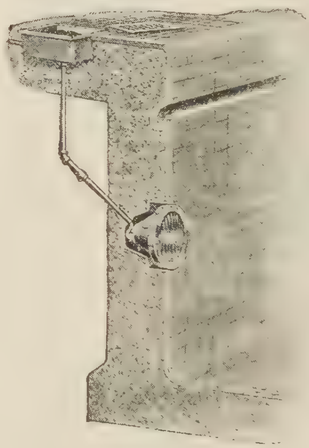
Seating surfaces are ground true and smooth.

The 15 to 60-watt globes are packed 50 to a carton; 100 to 200-watt and 300-watt globes, 18 to a carton.

Max. Size Lamp ....watts	15–60		15–60		15–60		15–60	
O.D.............in.	3 5/16		3 5/16		3 5/16		3 5/16	
Lgth. Over All...in.	4		5		6		7	
Carton.........lbs.	32		38		48		63	
Color	Cat. No.	Each	Cat. No.	Each	Cat. No.	Each	Cat. No.	Each
Clear.............	2392	$.60	2380	$.60	2383	$.60	2386	$.60
Frosted...........	2393	.95	2381	.95	2384	.95	2387	.95
Opal..............	2394	.90	2382	.90	2385	.90	2388	.90
Ruby..............	....	...	803	3.30	809	3.30	815	3.30
Blue..............	....	...	804	2.50	810	2.50	816	2.50
Green.............	....	...	805	2.50	811	2.50	817	2.50

Maximum Size Lamp ....watts	15–60		100–200		300	
O.D...........inches	3 5/16		4⅞		6	
Length Over All ....inches	8		8¾		9½	
Wt., Carton...pounds	70		44		52	
Color	Cat. No.	Each	Cat. No.	Each	Cat. No.	Each
Clear...............	2389	$.90	2395	$1.45	2376	$2.10
Frosted.............	2390	1.25	2396	2.05	2377	3.00
Opal................	2391	1.20	2397	1.90	2378	2.70
Ruby................	821	3.30	833	6.60	2373	7.20
Blue................	822	2.50	...	....	....	....
Green...............	823	2.50	835	5.00	2375	5.70

R & S Swimming Pool and Fountain Lighting Fixtures



Russell & Stoll Company, pioneers in the field of watertight and marine lighting, offer a complete line of underwater lighting units, perfect in every detail and suitable for every type of pool construction.

These fixtures are constructed of high grade valve bronze; equipped with polished chromium copper reflectors, clear spreadlight lens producing a wide horizontal beam of light without glare.

By the addition of color filters many attractive tints may be produced.

The illustration depicts a typical swimming pool wall construction with a No. 2362 bronze adjustable underwater floodlight in position in a cast bronze housing No. 2362H and a bronze cable box No. 2363 with cover removed and in which is coiled all surplus cable.

This floodlight pivots in the bronze housing allowing the fixture to be adjusted to the most efficient lighting angle; water cooled, because it is entirely surrounded by water when installed. By lifting floodlight out of pivot bearings in the bronze housing, fixture can be raised to surface and relamped in a few minutes without draining pool or disturbing current carrying line.

This unit will accommodate a Type G-30 floodlight lamp, 250 or 400 watts. Prices and detailed information of this fixture and various other style units covered in Bulletin 65 will be gladly forwarded upon application.

Thompson Lamp-Maintenance Hangers

The Thompson Hanger is a safety lowering switch, adapted for use with any reflector, regardless of the kind or size, in any industrial circuit.

The hangers are made with many modifications to meet a wide range of conditions. There are three types of sheave housing, open front, the semi-enclosed and the seal type.

All line wire connections are located inside the hanger, but the wiring outside of the hanger may be either exposed or enclosed in conduit by means of appropriate fittings. Hangers providing for exposed outside wiring are termed semi-enclosed and others, conduit type.

*No. 93-A

No. 93-A

This model has a medium depth of canopy or enclosure, adapted for either indoor or outdoor use. It has two porcelain bushings in the back of the canopy to provide for the entrance of line wires into the hanger. Lends itself readily to either open wiring or conduit distribution.

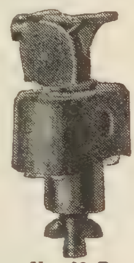
Cat. No.	Std. Pkg.	Wt., Lbs. Net	Wt., Lbs. Ship.	Price Each
†93-A	30	8	10	$9.00

*No. 93-B

This model is for use where it is desired to enclose line wires directly into the hanger. This hanger is exactly like the Model No. 93-A except that instead of having two porcelain bushings, there is one hole in the back of the canopy for attaching the conduit fittings, which may be of any kind desired.

There are no porcelain knobs on this model.

Cat No.	Std. Pkg.	Weight, Pounds Net	Weight, Pounds Shipping	Price Each
93-B	30	8	10	$9.00



No. 93-B

*Nos. 94-A and 94-B

No. 94-A

These two models have a deep skirted canopy to provide additional weather protection where it is desired.

Except for the difference in canopy, they are exactly the same as Nos. 93-A and 93-B respectively.

Cat. No.	Std. Pkg.	Weight, Pounds Net	Weight, Pounds Shipping	Price Each
†94-A	20	9	11	$10.00
94-B	20	9	11	10.00

*These models have a sheave housing which is semi-enclosed in such a manner that it is necessary for the chain to pass in and out horizontally.

Nos. †96 and 97

These two models correspond to the medium canopy hangers Nos. 93-A and 93-B, respectively, except that they have an open front sheave housing, which will enable the chain to operate at any angle in a vertical plane, below the horizontal, thus adapting them for use in connection with a sloping overhead support.

Cat. No.	Std. Pkg.	Weight, Pounds Net	Weight, Pounds Shipping	Price Each
†96	30	8	10	$9.00
97	30	8	10	9.00

No. 96

Nos. †98 and 99

These models have also the open front sheave housing, but are otherwise exactly the same as the deep skirted models Nos. 94-A and 94-B.

Cat. No.	Std. Pkg.	Weight, Pounds Net	Weight, Pounds Shipping	Price Each
†98	20	9	11	$10.00
99	20	9	11	10.00

†Porcelain knobs are provided on the sheave housing of these models only to serve as strain insulators if required.

Thompson Lamp-Maintenance Hangers

Sealtype Series

No. 201-A

The Sealtype Hanger has a sheave housing designed to give the greatest possible protection against deterioration from dirt and corrosion to the wheel which is the only moving part in the upper member of the hanger.

This sheave housing is tapped for ¾-inch conduit to enclose the chain. When the chain conduit is screwed into place the housing will be completely sealed, except for the opening in the bottom where the chain passes down inside of the hanger canopy. With this type of hanger the wheel is easily accessible for inspection.

The distinctive feature of the Sealtype Hanger series is the change in the sheave housing.

The Sealtype Hangers are offered to correspond with previously described models, as follows:

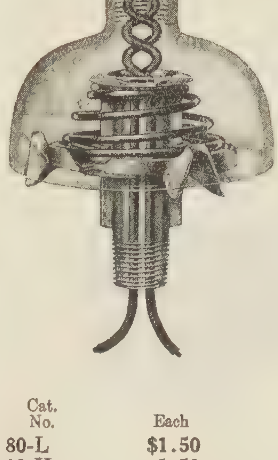
Cat. No.	Each	Corresponds to Model No.	Std. Pkg.	Weight, Pounds Net	Weight, Pounds Shipping
201-A	$10.00	93-A	30	8	10
201-B	10.00	93-B	30	8	10
202-A	11.00	94-A	20	9	11
202-B	11.00	94-B	20	9	11

Duplex Construction

In many plants the wiring distribution conduit will be some distance below the overhead support. To meet this condition, any of the models, except No. 95, can be supplied with the upper member in two parts, that is the sheave housing separated from the body of the hanger, and a special malleable iron flange plate tapped for ¾-inch conduit attached to top of canopy and another one to bottom of sheave housing, in order that a piece of conduit of the desired length may be inserted between the two members thus formed.

In specifying this construction add the letter D to the model number and 50 cents each to the net price of the device.

Thompson Shock Absorbers



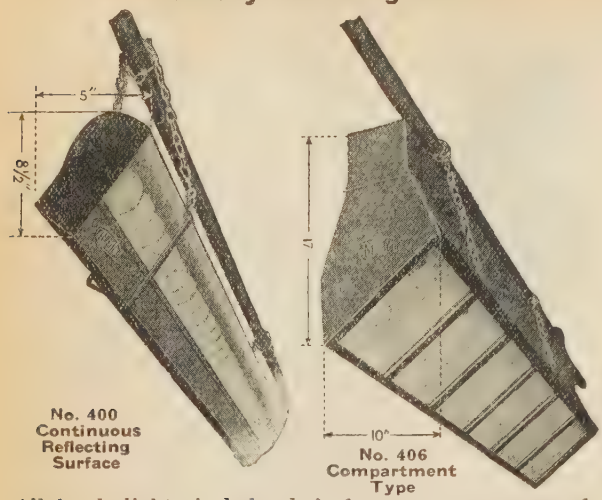
All parts, except spring, are malleable iron castings galvanized; weatherproof.

The lamp or socket wires should be given a loose twist, or meshed spiral form, inside of the stem and canopy, so as to provide flexibility for the vibrating movement.

The canopies of both models come regularly with a ½-inch female thread at the top, but when so specified on the order a ¾-inch male thread can be substituted. Both models have a ½-inch male thread at the bottom to be screwed into the lamp fixture.

Cat. No.	Each	For Lamps Weighing	Weight Pounds
80-L	$1.50	1½ to 5 Pounds	1
80-H	1.50	3 to 8 Pounds	1
74-L	2.50	5 to 12 Pounds	1¾
74-H	2.50	9 to 30 Pounds	1¾
74-HH	2.50	15 to 40 Pounds	1¾

Century Borderlights



No. 400 Continuous Reflecting Surface

No. 406 Compartment Type

All borderlights include chain hangers, scenery guards and splice box for feed cables.

Continuous Reflecting Surface

Cat. No.	Type of Reflector Strip	Outlet Wattage	Outlet Centers In.
400	Non-Fade Permanent White or Aluminum Paint	25–100	3, 4, 6
401	Sheet Aluminum	25–100	3, 4, 6
402	Sheet Chromium	25–100	3, 4, 6

Compartment Type—Permanent White Surface

Furnished with individual metal frames to receive colored gelatine mediums.

Cat. No.	Type of Reflector	Outlet Wattage	Outlet Centers Inches
406½	White Paint	100–150	6
406	White Paint	200	8, 10, 12
407	White Paint	300–500	12

Prices upon application.

Individual Reflector Type

No. 423 Individual Reflector

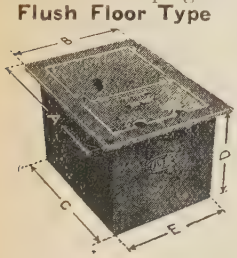
Furnished with heat-resisting colored roundels.

Cat. No.	Outlet Wattage	Outlet Center Inches
With Chromium Reflector		
423	100–150	6
424	200	8, 10, 12
425	300–500	12
With Porcelain Reflector		
419	200	10, 12
420	300–500	12
With Matte Aluminum Reflector		
410	50–100	4, 6
411	100–150	6
413	200	8, 10, 12
414	300–500	12
415	750–1000	12, 14

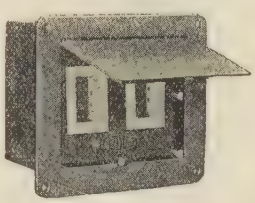
Century Floor and Wall Pockets

Furnished with plugs.

Flush Floor Type

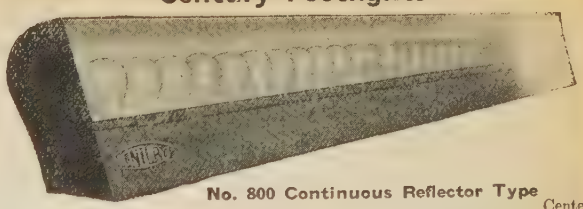


Flush Wall Type



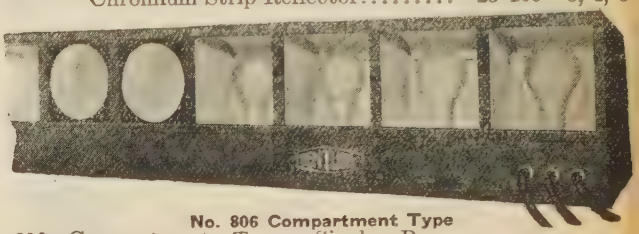
Cat. No.	Description	Each	Cat. No.	Description	Each
3091	1 Way	$10.00	3101	1 Way	$10.00
3092	2 Way	16.00	3102	2 Way	16.00
3093	3 Way	21.00	3103	3 Way	21.00
3094	4 Way	28.00	3104	4 Way	28.00

Century Footlights



No. 800 Continuous Reflector Type

Cat. No.	Description	Outlet Wattage	Center Outlet In.
800	Semi-Open Trough, Single Row; White Reflecting Surface; Splice Box for Feed Cables; Apron Included	25–100	3, 4, 6
801	Same as No. 800 except with Sheet Aluminum Strip Reflector	25–100	3, 4, 6
802	Same as No. 800 except with Sheet Chromium Strip Reflector	25–100	3, 4, 6

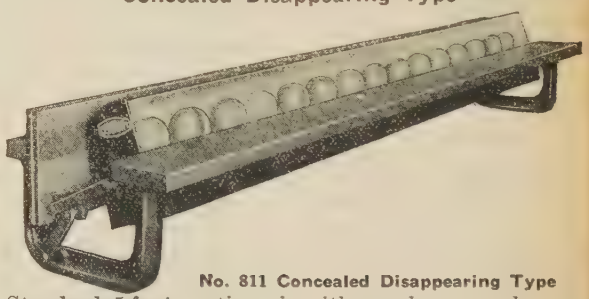


No. 806 Compartment Type

806	Compartment Type, Single Row; White Paint Reflector; with Metal Frame for Color Mediums; Splice Box for Feed Cables	25–100	6
808	Individual Reflector Type, Single Row; Aluminum Spun Reflectors; Heat-Resisting Colored Glass Roundels and Holders; Splice Box for Feed Cables	50–150	4, 6
809	Same as No. 808 except with Chromium Reflectors	50–150	4, 6
823	Individual Reflector Type, Double Row; Aluminum Spun or Chromium Reflectors; Heat-Resisting Colored Glass Roundels and Holders; Splice Box for Feed Cables	50–150	4, 6

Prices upon application.

Concealed Disappearing Type



No. 811 Concealed Disappearing Type

Standard 5-foot sections in either oak or maple wood trims; mercury disconnect (on and off) switches and splice box for feed cables.

Cat. No.		Outlets	Wattage	Each
811	Semi-Open Trough, Single Row; White Reflecting Surface	15	25–100	$50.00
812	Compartment Type, Single Row; White Paint Reflectors	12	25–100	55.00
819	Individual Reflector Type; Aluminum Reflectors; Heat-Resisting Colored Glass Roundels	12	25– 60	60.00
822	Same as No. 819 except with Chromium Reflectors	12	25– 60	65.00
820	Individual Reflector Type; Aluminum Reflectors; Heat-Resisting Colored Glass Roundels	9	75–150	73.00
821	Same as No. 820 except with Chromium Reflectors	9	75–150	78.00

Cove Striplights, Aisle Lights, Spotlights, Floodlights and Dimmers

Detailed blueprints and prices upon application.

No. 600 Kliegl Permanent Type Borderlights

For 60 to 100-watt clear or naturally colored lamps.

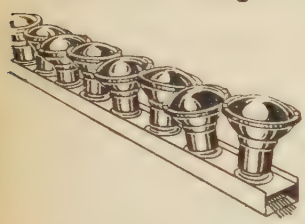
Furnished completely wired, with circuits ending at a special terminal block in a splice box at right or left end as specified.

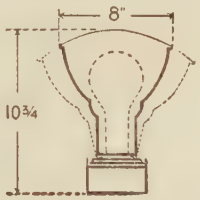
Furnished in one continuous length, or in sections; with chains and pipe batten for hanging.

State length of border, number of colors and size of lamps required when ordering.

Prices on application.

No. 731 Kliegl Cove Light Strips





Universally and adjustably mounted so that unit can be independently set to suit conditions; has GRC type reflectors with hinged frame for colored glass roundels.

Made in two sizes: No. 731 with short neck reflector for 100-watt lamps; No. 731A with long neck reflector for 150-watt lamps. Specify length of strip, straight or curved, and number of lights for each color per foot required when ordering. Prices on application.

Kliegl Incandescent Spotlights

Prices do not include lamps.

No. 276 Series

For 75-400-Watt Lamps

Table base mounting.

No. 276

No.	Each	Lamp Watts	Lamp Bulb	Lamp Base	Wt. Lbs.
*276	$22.00	75	G16½	Prong	2
*276A	22.00	100	P25	Med. Scr.	3
276B	35.00	250–400	G30	Med. Scr.	14

*Lamp included.

No. 53 Series

For 250-400-Watt Lamps

Diameter lens, 4½ inches. Medium screw lamp base; G30 bulb.

No. 53A

Bulb No.	Each	Mounting	Wt. Lbs.
53	$10.00	Yoke Only	5
53A	12.00	Wall Bracket	6
53B	12.00	Table Base	12¼
53C	15.00	Floor Stand	17¾
53E	12.00	Pipe Clamp	6¼
53S	15.00	Yoke and Shutter	6

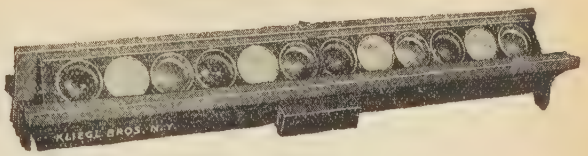
With Automatically-Operated Color Frames

For 2000-Watt Lamps

With magnet controls and circular color frames for d.c. Table base mounting. Mogul prefocused lamp base; G48 bulb.

No.	72B	73B
Diameter Lens, inches	6	8
Weight, pounds	74	77
Each	$150.00	160.00

Kliegl Disappearing Type Footlights



No. 830

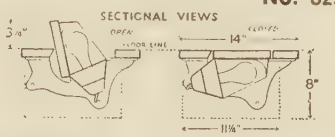
When not in use footlights may be closed down flush with stage floor, leaving an unobstructed platform. Serviceable in instances where the stage is used sometimes for entertainments and at other times for speakers and lecturers, as in schools, clubs, assembly rooms, etc.

Furnished completely assembled; in straight standard 5-foot lengths, with splice box, automatic cut-off switches and oak flooring. Receptacles wired on three 2-wire circuits for independent control of three colors. Sections have sufficient allowance to permit mitering on ends for curved installations. Special lengths, if needed.

Comply with Underwriters' requirements.

Lamps are not included in price.

No. 829

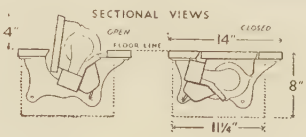


Single row, open type footlight with receptacles for fifteen 60 to 100-watt lamps; complete 5-foot section.

Weight, 46½ pounds.

No. 829.....each **$50.00**

No. 830



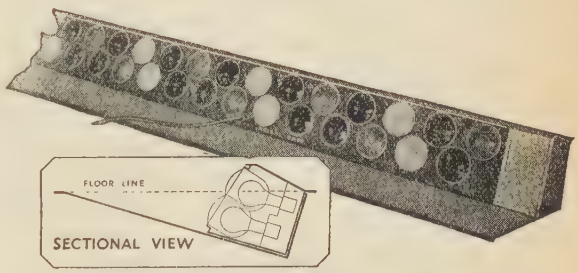
Single row enclosed type footlight with colored glass roundels, for twelve 100-watt lamps; complete 5-foot section.

Weight, 56 pounds.

No. 830.....each **$85.00**

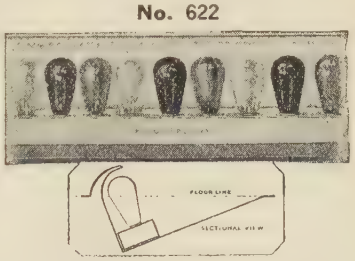
Kliegl Permanent Semi-Flush Type Footlights

No. 621



Double-row enclosed type footlight with colored glass roundels; for 100 or 150-watt clear lamps.

No. 622



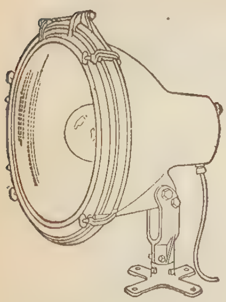
Single-row, open trough type footlight for 60 to 100-watt clear or naturally colored lamps. Fitted with single row medium screw base receptacles.

State length, number of colors and size of lamps required when ordering. Prices on application.

Crouse-Hinds Floodlight Projectors

Medium and Long Range

Schedule F



Type ADA-14

Has adjustable mountings with swivel base. By removing the base casting, a slip-fitter base is obtained which is designed to fit over pipe, the diameters of which are: Type ADA-12, ¾-inch; Types ADA-14, ADE-14 and ADA-16, 1¼-inch.

Types ADA-14 and ADA-16, the standard mounting base is removed and a CGB295 connector is furnished in the top of the slip-fitter for wiring convenience. Several bases and brackets can be furnished.

Two U-bolts are furnished with each Type ADA-12 floodlight which will clamp the floodlight to any pipe from ¾ to 1½ inches.

Type ADA-14, quadrant mounting, cast brass base; Type ADE-14, steel trunnion mounting, cast brass base.

Lamp receptacles for Type ADA-12, porcelain medium screw base (No. HL8509); for Types ADA-14 and ADE-14, Mogul screw base (Cat. No. HL2128); for ADA-16, porcelain Mogul screw base (Cat. Nos. HL2128 for PS lamp, HL7136 for G bulb lamp).

Lamps for Type ADA-12, 150-watt, PS-25 bulb; 200-watt, PS-30 bulb; or 250-watt, G-30 bulb. When using the G-30 bulb lamp, the floodlight must not be tipped more than 45 degrees below the horizontal.

Circular louvers for eliminating spill light can be provided.

Clear, pyrex, heat-resisting lens. Clear, spread or diffusing convex lenses can be furnished. Colored lenses can be furnished for ADA-12· color screens for ADA-14, ADE-14 and ADA-16.

Weight of Type ADA-12, 14½ pounds; Type ADA-14, 42 pounds; Type ADE-14, 48 pounds; Type ADA-16, 66 pounds.

Aluminum finish.

Type ADA-12

Cat. No.	Style	Color	Cat. No.	Style	Color
		Smooth Reflector			
40823	Plain	Clear	**40850**	Plain	Green
40826	Diffusing	Clear	**40853**	Diffusing	Green
40829	Spread	Clear	**40856**	Spread	Green
40832	Plain	Red	**40859**	Plain	Purple
40835	Diffusing	Red	**40862**	Diffusing	Purple
40838	Spread	Red	**40865**	Spread	Purple
40841	Plain	Amber	**40868**	Plain	Blue
40844	Diffusing	Amber	**40871**	Diffusing	Blue
40847	Spread	Amber	**40874**	Spread	Blue
		Hammered Reflector			
40824	Plain	Clear	**40851**	Plain	Green
40827	Diffusing	Clear	**40854**	Diffusing	Green
40830	Spread	Clear	**40857**	Spread	Green
40833	Plain	Red	**40860**	Plain	Purple
40836	Diffusing	Red	**40863**	Diffusing	Purple
40839	Spread	Red	**40866**	Spread	Purple
40842	Plain	Amber	**40869**	Plain	Blue
40845	Diffusing	Amber	**40872**	Diffusing	Blue
40848	Spread	Amber	**40875**	Spread	Blue

Types ADA-14, ADE-14 and ADA-16

Type	Reflector	With Standard Mounting Cat. No.	With Slip-Fitter Mounting Cat. No.	Lamp Watts	Lamp Bulb
ADA-14	Hammered	**41212**	***41289**	500	PS-40
ADA-14	Smooth	**41213**	***41290**	300	PS-35
ADE-14	Hammered	**41214**	.....	500	PS-40
ADE-14	Smooth	**41215**	.....	300	PS-35
ADA-16	Hammered	**41056**	†**41291**	300 to 1000	PS-52
ADA-16	Smooth	****41057**	†**41292**	300 to 1000	PS-52
ADA-16	Smooth	**41058**	†**41293**	1000	G-40

*HL3682 slip-fitter base can be furnished separately at $3.00, when it is desired to change from standard to slip-fitter mounting.

**HL3252 extension for using 500 or 1000-watt G-40 lamps with this floodlight can be furnished at $3.00.

†HL3683 slip-fitter base can be furnished separately at $5.00, when it is desired to change from standard to slip-fitter mounting.

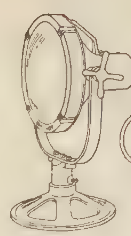
Catalogue numbers do not include incandescent lamps.

Prices upon Application

Type ADR-12 Crouse-Hinds Floodlight Projectors

Schedule F

Portable



Type ADR-12 Floodlight is a small compact unit especially adaptable for portable use either when a narrow beam spotlight or a wide evenly distributed beam of light is required.

Has a 11½-inch crystal mirrored glass reflector with hammered surface when used with PS bulb lamp or smooth surface when used with G bulb lamp. Porcelain medium screw base lamp receptacle (Cat. No. HL8509). An adapter can be furnished for use with 21, 32 or 50 candle power, 6 or 12-volt bayonet base lamps at $1.85 each.

Cast aluminum alloy housing. Non-ventilated, dust-tight and weatherproof.

Steel trunnion mounting with 12-inch wheel base of cast aluminum alloy.

Ten feet of rubber-covered cable is furnished with a medium screw plug. A watertight stuffing box is provided in the rear of the housing.

Clear Pyrex, or colored, convex, heat resisting lens in plain, spread or diffusing styles.

Lamps, 150-watt, PS-25 bulb; 200-watt, PS-30 bulb when used with a hammered reflector and diffusing lens for wide angle distribution; 250-watt, G-30 bulb when used with a smooth reflector and clear lens for spotlight use. When using the G-30 bulb lamp the floodlight must not be tipped more than 45 degrees below the horizontal.

Natural aluminum finish. Weight, 27 pounds.

Type	Lens	Reflector	Cat. No.	Dimensions, Inches Height	Width	Depth
ADR-12	Plain, Clear	Smooth	**42023**	22	15½	11¼
ADR-12	Diffusing, Clear	Hammered	**42024**	22	15½	11¼

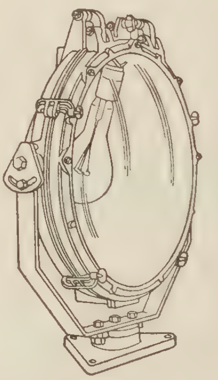
Prices do not include incandescent lamps.

Prices upon application.

Type LCE-24 Crouse-Hinds Floodlight Projectors

Medium and Long Range

Schedule F



The increased efficiency of these projectors allows large areas to be lighted with a smaller number of projectors, with a corresponding decrease in installation cost, lighting load and maintenance costs. When projectors are used for lighting railroad or factory yards, the area immediately beneath the projector between the tower and the place where the main beam strikes is often quite dark. These projectors can be supplied with a large hood which reflects part of the stray light above the beam to the ground. Hood also prevents dust and soot from falling on the lens.

Cast aluminum alloy housing; dust-tight and weatherproof.

Crystal glass reflector with smooth or hammered surface, 24-inch diameter.

Porcelain Mogul screw base lamp receptacle. (Cat. No. HL8751.)

Clear, convex, Pyrex heat-resisting lens. Spread or diffusing convex, heat-resisting lens furnished without additional charge, if specified on the order.

Lamps, 750 to 2000-watt, PS-52 bulb; 1000 or 1500-watt, G bulb.

Case, natural aluminum finish; base and trunnion, galvanized.

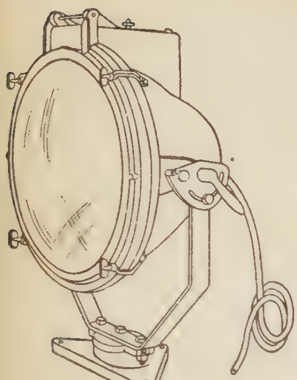
Type	Reflector	Cat. No.	Lamp Watts	Lamp Bulb	Wt., Lbs.
LCE-24	Smooth	**40466**	750 to 2000	PS-52	148
LCE-24	Smooth	**40468**	1000 or 1500	G	148
LCE-24	Hammered	**40467**	750 to 2000	PS-52	148

Prices upon application.

Type LCE-1120 Crouse-Hinds Floodlight Projectors

Schedule F

Medium and Long Range



For use with 1500-watt lamps. The use of this projector reduces the installation cost, lighting load and maintenance cost for the illumination of large areas. Can be arranged with plain, spread or diffusing lens.

Has a 20-inch, crystal mirrored glass reflector either narrow or wide beam. The wide beam is recommended for everything except very long range projection. Mogul screw base lamp receptacle (Cat. No. HL7012).

Has 3-way focusing mechanism, operated from the outside of the case.

Steel trunnion mountings on cast feraloy base. Both horizontal and vertical adjustable stops are provided. The floodlight can be turned around or tipped over for convenience in relamping and cleaning, and returned to its exact original setting. Special bases for various mounting conditions can be furnished.

A 3-foot lead of 2-conductor, rubber-covered cable is furnished. The cable enters the housing through a water-tight stuffing box. Each wire covered with slow-burning insulation.

Case is natural aluminum finish; base and trunnion, galvanized finish.

Type	Reflector	Cat. No.	Lamp Watts	Lamp Bulb	Wt. Lbs.
LCE-1120	Narrow Beam	**41548**	750 to 1500	PS-52	115
LCE-1120	Narrow Beam	**41549**	1000 to 1500	G	115
LCE-1120	Wide Beam	**41550**	750 to 1500	PS-52	115

Prices do not include incandescent lamps.

Prices upon application.

Crouse-Hinds Underwater Floodlights

Schedule F

Developed for submersion in water, such as in fountain and swimming pool installations. Provided with 2 tapped holes for connection to ¾-inch flexible drain hose.

Type FDS-12 is especially adapted to underwater lighting of swimming pools by wet-niche method. Wet-niche bracket mounting allows unit to be lifted from its brackets and raised to surface of pool for relamping. Can also be furnished with angle bracket mounting for fountains.

Types FDE and FDV provide adequate lighting for any size or type of fountain. Type FDE-12 has a trunnion and swivel base. Type FDV-12 has a servicing pedestal which allows floodlight to be raised above water for relamping when mounted just below surface of water in a fountain.

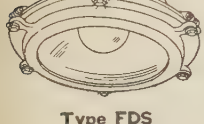
Has porcelain mogul screw base lamp receptacle (Cat. No. HL7136). Has a 12-inch silvered glass reflector.

Lamps are 500-watt, 115-volt, G-40 bulb. Can be arranged for use with 250-watt, G-30 bulb or 400-watt, G-30 bulb.

With Positioning Stops and Brackets

For Wet-Niche Installation

Type	Lens	Cast Aluminum Cat. No.	Cast Aluminum Net. Wt.	Cast Bronze Cat. No.	Cast Bronze Net. Wt.
FDS-12	Plain	**42025**	30	**42021**	55
FDS-12	Spread	**42071**	30	**42072**	55
FDS-12	Diffusing	**42073**	30	**42074**	55
With 2 Angle Brackets					
FDS-12	Plain	**42027**	30	**42026**	55
FDS-12	Spread	**42075**	30	**42076**	55
FDS-12	Diffusing	**42077**	30	**42078**	55
With Trunnion and Base					
FDE-12	Plain	**42029**	32	**42028**	57
FDE-12	Spread	**42079**	32	**42080**	57
FDE-12	Diffusing	**42081**	32	**42082**	57
With Servicing Pedestal					
FDV-12	Plain	**42031**	37	**42030**	62
FDV-12	Spread	**42083**	37	**42084**	62
FDV-12	Diffusing	**42085**	37	**42086**	62



Type FDS

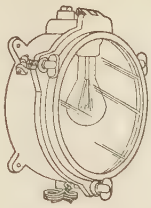
Cat. No. does not include lamps.

Prices upon application.

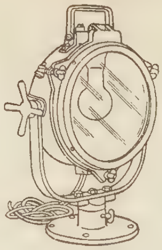
Crouse-Hinds Floodlights

Short and Medium Range

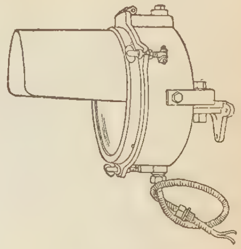
Schedule F



Type RM



Type RME



Type RMU with Hood

Types RM and RMU Floodlights meet lighting requirements in roundhouses, steel mills, on construction work or wherever stationary, strong, gas and moisture-proof illuminating units are desired. When mounted in roundhouses or other buildings where corroding vapors circulate, they offer full protection against the damage to which exposed lights and wiring systems in such locations are subjected.

Type RM floodlights are designed for fastening to a flat surface and projecting light at right angles to the plane of the surface. Fastened by 4 lugs on back.

Type RMU floodlights have a universal wall bracket, which allows the beam of light to be directed where desired.

Type RME is a rugged, cast feraloy floodlight for portable use. Is trunnion mounting. Used where it is desired to transport the light to the job, also when working under cars and locomotives.

Has porcelain enameled steel reflector. Porcelain enameled reflector used for wide spread beam and short range. Hammered glass reflector concentrates light for projection to a greater distance.

Porcelain, medium screw base lamp receptacle (Cat. No. HL674). Mounted on bracket adjustable with screwdriver.

Wiring connections for Types RM and RMU, ¾-inch threaded hubs at top and bottom. A pipe plug is furnished to close the unused hub. For Types RM and RME, two 3-foot leads of No. 14 gauge stranded wire. For Type RMU, 30 inches steel armored cable with 2 CGB285 connectors.

Cast feraloy housing. Gas and moisture proof.

Cast feraloy door frame, gasketed to exclude gas, moisture and dust from interior. Held in place by 3 swivel bolts with capped wing nuts.

Clear, convex, heat-resisting lens. Spread or diffusing convex, heat-resisting lens can be furnished.

For 10-inch floodlight, 60 or 100-watt A bulb lamps; for 12-inch floodlight, 150 or 200-watt PS bulb lamps.

Baked black enamel finish.

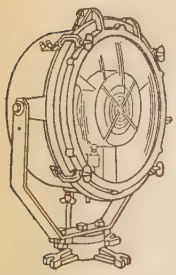
Cat. No.	Reflector	Width	Height	Depth	Wt. Lbs.
Type RM-10—60 or 100-Watt—10-Inch Reflector					
29788	Porcelain Enameled........	..	14	5⅞	20
40407	Hammered Glass...........	..	14	5⅞	20
Type RM-12—150 or 200-Watt—12-Inch Reflector					
26067	Porcelain Enameled........	..	16⅝	6 11/16	30
40408	Hammered Glass...........	..	16⅝	6 11/16	30
Type RME-10—60 or 100-Watt—10-Inch Reflector					
29803	Porcelain Enameled........	14	20¼	5¾	35
40411	Hammered Glass...........	14	20¼	5¾	35
Type RME-12—150 or 200-Watt—12-Inch Reflector					
29480	Porcelain Enameled........	16¾	22¾	6 5/16	45
40412	Hammered Glass...........	16¾	22¾	6 5/16	45
Type RMU-10—60 or 100-Watt—10-Inch Reflector					
29793	Porcelain Enameled........	12⅝	14 13/16	5¾	27
40409	Hammered Glass...........	12⅝	14 13/16	5¾	27
Type RMU-12—150 or 200-Watt—12-Inch Reflector					
29657	Porcelain Enameled........	15	17¼	6 5/16	37½
40410	Hammered Glass...........	15	17¼	6 5/16	37½

Dimensions in inches.

Prices upon Application

Crouse-Hinds Incandescent Searchlights

Schedule F



Type DCE-16

Designed for long range or spotlight use.

Has 16-inch commercial precision mirrored glass reflector (Cat. No. HL4132).

Type DCE-16 furnished with 2 feet weatherproof cable; Types DCX-16 and DCY-16 with slip rings in the pedestal except for low voltage lamps, in which case flexible leads are furnished.

Clear, plain, convex, heat resisting lens. Diameter 16 1/16 inches.

Length of standard control of stem of Type DCX-16 below base, 5 inches.

Type	Mounting	Cat. No.	Lamp Receptacle	Wt., Lbs.
DCE-16	Trunnion	41353	Mogul Screw	97
DCE-16	Trunnion	41354	Mogul Prefocus	97
DCE-16	Trunnion	41983	Bipost	97
DCX-16	Pilot House Control	41356	Mogul Prefocus	165
DCX-16	Pilot House Control	41984	Bipost	165
DCY-16	Pedestal	41355	Mogul Prefocus	155
DCY-16	Pedestal	41985	Bipost	155

Lamps—For Continuous Operation

Watts	Bulb	Volts	Life	Service	Base	Burning Position	Lt. Cen. Lgth., In.
500	G-40	115	800	Floodlight	Mogul Screw	*B.D.	4 1/4
1000	G-40	115	800	Floodlight	Mogul Screw	*B.D.	5 3/16
1000	T-20	115	500	Air Beacon	Bipost	†B.D.	4

Searchlight Lamps—For Intermittent Service

420	G-25	12	100	Headlight	Mogul Prefocus	*B.D.	1 11/16
900	T-20	30	50	Projection	Mogul Prefocus	B.D.	3 7/16
1000	T-20	115	50	Projection	Mogul Prefocus	†B.D.	3 7/16

*Searchlight can operate in any position with this lamp.

†Searchlight should not be tipped up or down more than 25° with this lamp.

Catalogue numbers do not include incandescent lamps.

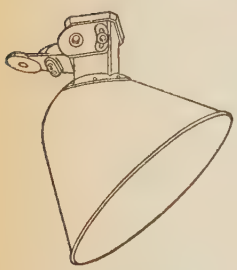
Type lamp to be used must be specified when ordering.

Prices upon application.

Type MPA-1 Crouse-Hinds Floodlights

Short Range—Open Type

Schedule F



With Cross-Arm Base

Short range, wide angle floodlight designed for illumination of gasoline service stations, tennis courts, playgrounds, swimming pools, parking lots, football fields and similar places. Has Mogul screw base skeleton lamp receptacle (Cat. No. HL7012).

The cross-arm mounting bracket of cast aluminum terminates in a round plate with a hole for 3/4-inch bolt in the center. The bracket can be bolted to a wood or steel cross-arm.

The slip-fitter mounting consists of a cast aluminum bracket and slip-fitter for 1 1/2-inch pipe.

The steel pole-bracket is drilled for two 5/8-inch bolts or lag screws. Can be fastened to side of a wood pole or building.

Lamps are 1000, 1500 or 2000-watt, PS-52 bulb General Lighting Service. White bowl lamps can be used to reduce glare. Hard glass lamps are recommended as they reduce breakage caused by driving rain or snow.

Two leads, No. 12 asbestos-wrapped wire, attached to the lamp receptacle run through hollow support arm. Adapter cap for overhead wiring can be furnished with slip fitter mounting. Cross-arm and pole bracket mountings furnished with a wire outlet in bottom of bracket arm, which consists of a porcelain 1-wire cover; diameter of hole, 5/8 inch.

Type	Mounting	Without Auxiliary Reflector Cat. No.	With Auxiliary Reflector Cat. No.	Wt. Lbs.
MPA-1	1 1/2-Inch Slip-Fitter	41660	41657	37
MPA-1	Cross-Arm	41731	41658	37
MPA-1	Pole-Bracket	41732	41659	37

No. HL3935, Overhead Feed Cap Only.

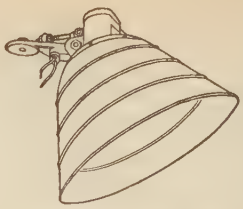
Prices do not include incandescent lamps.

Prices upon application.

Type MPA-2 Crouse-Hinds Floodlights

Schedule F

2-Lamp—Open Type



Cross-Arm Mounting

Particularly adapted to the lighting of baseball parks, football fields, swimming pools, play grounds, tennis courts and gasoline service stations. Its size, shape and reflecting surface combine to make an efficient unit. Can be mounted on wood or steel poles, cross arms, steel towers or on sides of buildings.

Has 2 Mogul screw base skeleton lamp receptacles (Cat. No. HL7012). The 30-inch reflector is of copper-bearing steel with a 3-layer mat white porcelain enamel finish inside and a blue porcelain enamel finish outside.

Cross-arm mounting bracket of cast feraloy terminates in a round plate with a hole for a 1/2-inch bolt in the center and a cast quadrant slot. Bracket can be bolted to cross-arm.

Slip-fitter mounting is for 2 1/2-inch pipe. Furnished with a wire outlet so that wires can be brought through the steel pole and out at the slip-fitter. Slip-fitter is attached to the standard bracket with two 1/2-inch cap screws which are furnished with it.

Pole-bracket mounting is 1/4-inch pressed steel formed to fit the pole. It is attached to the standard bracket with two 5/8-inch bolts or lag screws.

Three asbestos-wrapped wire leads attached to lamp receptacles, one wire being common; run through hollow bracket arm and are long enough to permit splicing to rubber-covered wire.

Two 750, 1000, 1500 or 2000-watt, PS-52-bulb, General Lighting Service lamps. White bowl lamps reduce glare; hard glass reduces breakage caused by driving rain or snow.

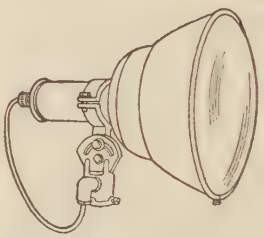
Type	Mounting	Cat. No.	Wt., Lbs.
MPA-2	Cross-Arm	41696	47
MPA-2	2 1/2-Inch Slip-Fitter	41697	55
MPA-2	Pole-Bracket	41698	53

Prices do not include incandescent lamps.

Prices upon application.

Crouse-Hinds Floodlights

Schedule F



Designed for the illumination of football fields, indoor baseball fields, parking spaces, gasoline service stations, and other areas of similar nature. Can be furnished with heat-resisting clear lenses or without lenses.

Aluminum finish.

Has Mogul screw base lamp receptacle (Cat. No. HL7012).

Lamps: 1000-Watt Floodlight—750 or 1000-watt, PS-52 bulb, 110-volt General Lighting Service lamps; 1500-watt, PS-52 bulb lamp can be used in the unit without lens; 500-Watt Floodlight—300 or 500-watt, PS bulb, 110-volt General Lighting Service lamps.

Furnished with 3 feet of 2-conductor duplex cable. This cable has a very heavy weatherproof rubber jacket. The individual wires are insulated with slow-burning insulation of Type AF construction. The cable enters the housing through a stuffing box with tapered rubber bushing. The rubber jacket is cut away where it enters the housing, leaving only the slow-burning insulation inside the unit.

Where a group of floodlights are to be connected to open wiring, these floodlights can be furnished with Type FBB-2 Condulets and short leads of asbestos-covered wire instead of the duplex cable. This can be done without extra charge if specified on the order.

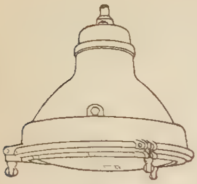
Type	Mounting	With Lens: With Hood Cat. No.	With Lens: Without Hood Cat. No.	With Lens: Wt., Lbs.	Without Lens: With Hood Cat. No.	Without Lens: Without Hood Cat. No.	Without Lens: Wt., Lbs.
MDB-16 1000-Watt	1-in. Slip-Fitter..	41740	41741	30	41746	41747	24
	1 1/2-in. Slip-Fitter	41742	41743	30	41748	41749	24
	Threaded-Fitter	41744	41745	30	41750	41751	24
MDB-14 500-Watt	1-in. Slip-Fitter.	41767	41770	26 1/2	41773	41776	23
	1 1/2-in. Slip-Fitter	41768	41771	26 1/2	41774	41777	23
	Threaded-Fitter	41769	41772	26 1/2	41775	41778	23

Prices do not include incandescent lamps.

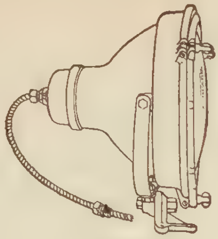
Prices upon application.

Crouse-Hinds Industrial Lighting Units

Schedule F



Type RLS



Type RLU

Types RLS and RLU Industrial Lighting Units meet lighting requirements in roundhouses, steel mills or wherever a strong, stationary, gas and moistureproof illuminating unit is desired. When mounted in roundhouses or other buildings where corroding vapors circulate, they offer full protection against the damage to which exposed lights and wiring systems in such locations are subjected.

Reflectors are porcelain enameled steel. Size 12 or 16 inches.

Medium screw base lamp receptacles for Types RLS-12 and RLU-12 (Cat. No. HL8079); skeleton mogul screw base for Types RLU-16 and RLS-16 (Cat. No. HL7012).

Type RLS has suspension mounting. Type RLU has universal wall bracket.

Cast feraloy or cast silicon aluminum alloy housing; gas and moisture-proof.

Wiring connection of Type RLS, direct to conduit by ¾-inch pipe. Type RLU connects to conduit by a flexible, steel armored cable and 2 CGB285 connectors, making a gas and vaporproof connection.

Clear, convex, Pyrex, heat-resisting lens. Diffusing, convex, heat-resisting lens can be furnished.

Cast feraloy or cast silicon aluminum alloy door frame held against an asbestos gasket by 3 swivel bolts and capped wing nuts. Door is hinged on one side.

Cast aluminum door and frame, natural aluminum finish; cast feraloy door and frame, black enamel finish.

Type RLS-12—12-Inch Reflector

100 to 200-Watt

Cast Feraloy Cat. No.	Wt., Lbs.	Cast Aluminum Cat. No.	Wt., Lbs.	Dimensions, Inches Diameter	Height	Size of Pipe	Lamp Watts	Bulb
29769	40	**29775**	20	15⅜	16½	¾	100	PS or A
29768	40	**29774**	20	15⅜	16½	¾	150	PS-25
29767	40	**29773**	20	15⅜	16½	¾	200	PS-30

Type RLS-16—16-Inch Reflector

300 or 500-Watt

29726	64	**29732**	32	19⅜	18¼	¾	300 or 500	PS

Type RLU-12—12-Inch Reflector

100 to 200-Watt

Cast Feraloy Cat. No.	Wt., Lbs.	Cast Aluminum Cat. No.	Wt., Lbs.	Dimensions, Inches Diameter	Width	Height	Lamp Watts	Bulb
29772	47	**29778**	28	15⅜	18¾	17⅝	100	PS or A
29771	47	**29777**	28	15⅜	18¾	17⅝	150	PS-25
29770	47	**29776**	28	15⅜	18¾	17⅝	200	PS-30

Type RLU-16—16-Inch Reflector

300 or 500-Watt

29729	73	**29735**	42	19⅜	23	19⅜	300 or 500	PS

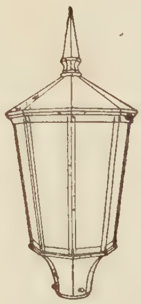
Catalogue numbers do not include lamps.

Prices Upon Application

Type GCP-14 Crouse-Hinds Lantern Floodlights

Schedule F

With Floodlighting Reflector



With 4-Inch Slip-Fitter

An ornamental type floodlight designed for illumination of buildings, gasoline service stations and other subjects where the appearance of the lighting unit is a factor of importance. Daytime appearance is that of an ornamental street lantern; at night the reflector on the inside transforms it into a powerful floodlight.

This lantern is listed in 2 ways. Form A for use in lighting buildings or other subjects where beam is directed above the horizontal. Sufficient light is reflected below horizontal with this type to illuminate lower portion of buildings. Has a heat-resisting top canopy. A horizontal adjustment of 45° is provided so that the beam can be turned to strike building at an angle, and still have one side of lantern parallel with building. Form B lantern furnished with one side panel of heat-resisting glass. Beam passes through this panel and the horizontal adjustment of reflector is locked. This type is intended for lighting ground areas and low buildings, such as gasoline service stations.

Has 14-inch hammered mirrored glass reflector (Cat. No. HL3862). Main floodlight lamp receptacle is porcelain Mogul screw base (Cat. No. HL2128); auxiliary lamp, porcelain medium screw base (Cat. No. HL6019); unit without reflector, Mogul screw base or series film cutout. Two leads of asbestos-wrapped wire are connected to lamp receptacle and extend one foot through bottom lantern. Frame is of cast aluminum alloy. Metal portions painted green on outside.

Usually mounted at curb line on ornamental posts when used for lighting buildings. Should be mounted from 8 to 14 feet above ground, poles spaced not closer than 20 feet apart. Table below gives maximum distances between poles for different sidewalk widths, for single units.

Sidewalk Width	feet	10	15	20
Maximum Spacing Between Poles	feet	30	45	60

Slip-fitter mountings for 4-inch pipe or 7-inch ornamental pole top. An adapter can be supplied for 4-inch slip-fitter to take 2½-inch pipe. A cast feraloy double bracket can be supplied with slip-fitter for 4-inch pipe at bottom and arranged to take 2 Type GCP-14 lanterns with 4-inch slip-fitter bases. An ornamental cast feraloy base can be furnished with or without a pole. Top of base is tapped for 4-inch pipe. Base is attached to a concrete foundation by four ¾-inch bolts, spaced 90° apart on a circle of 6⅜-inch radius.

Main floodlight lamps are 300 to 1500-watt, PS bulb. When used with HL3252 adapter, 500 to 1500-watt, G bulb lamps can be used. Auxiliary lamp, any medium screw base lamp up to 200-watt, PS-30 bulb.

With Wide Beam Reflector

Type	Description	With 4-Inch Slip-Fitter Base Cat. No.	With 7-Inch Slip-Fitter Base Cat. No.	Wt., Lbs.
GCP-14	Form A—For Lighting above Horizontal.....	**41322**	**41323**	120
GCP-14	Form B—For Lighting below Horizontal.....	**41324**	**41325**	120

With Narrow Beam Reflector

Type	Description	With 4-Inch Slip-Fitter Base Cat. No.	With 7-Inch Slip-Fitter Base Cat. No.	Wt., Lbs.
GCP-14	Form A—For Lighting above Horizontal.....	**41402**	**41401**	120

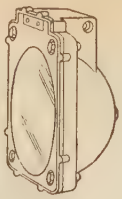
Catalogue numbers do not include incandescent lamps.

Prices upon Application

Type RDC-8 Crouse-Hinds Floodlights
For Lighting Pits, Auto Lifts and Underpasses

Schedule F

Form F



Form W

This floodlight is designed for mounting in concrete. It is made in 2 styles, one for floor mounting and the other for wall mounting.

Form F is designed for mounting in the floor. It is watertight, with a door that overlaps the case, and yet the projection above the concrete is only about 3/16 of an inch. The surface of the door has a rough pebbled surface which prevents its becoming slippery. Has a wide, flat gasket between the door and the case. It is provided with a flat lens which is heavy enough to allow it to be stepped on or driven over and offers great resistance to tools or other articles that might be dropped on it. Can also be furnished with a new type of glass lens which has been treated to increase its resistance both to impact and to a static load. It is approximately 4 times as strong as any other heat-resisting glass, and is practically unbreakable under any conditions normally encountered. This special glass is available only in the plain type.

Any unit installed in the floor should be provided with a ½-inch drain pipe connecting the tapped drain hole in the bottom of the housing with a sewer. This provides a drain for condensation and maintains atmospheric pressure inside the unit. If connection to a sewer is not practical the drain pipe can be run several feet into the ground into a hole filled with crushed stone.

Form W is similar to Form F, except it is provided with a hinged and flush door, so that it can be set absolutely flush with the concrete wall. It can also be mounted on the wall by using the L bracket and mounted on the ceiling by using the Z bracket. This unit provides lighting for pits, underpasses, tunnels, washracks, etc. The refracting lenses can be set to refract the light either up or down.

Has an 8-inch porcelain enameled steel reflector. A silvered glass, narrow beam reflector can be furnished. Porcelain medium screw base lamp receptacle (Cat. No. HL6019).

Two ¾-inch hubs are provided, one on each side of the housing so that wiring can be carried through the unit when several floodlights are mounted in a row. The reflector should be removed from the floodlight when wiring. Wire with slow-burning insulation must be used.

Form W has 8⅜-inch flat, heat-resisting glass or flat refracting lens which projects the light in one direction. Form F has 8½-inch flat, heat-resisting glass, impact-resisting, or flat, refracting lens.

Lamp, 100-watt, A-23 or PS-25 bulb; 150-watt, PS-25; or 200-watt, PS-30 bulb. Lamp receptacle bracket is adjustable and can be set for any of these lamps by loosening 2 screws and sliding the bracket until lamp filament is at the center of reflector. Unless otherwise specified, all units furnished with lamp receptacle set for 200-watt lamps.

Black enamel finish.

Form W—Wall Mounting

Type	Description	Without Grid Glass Cat. No.	With Grid Glass Cat. No.	Wt. Lbs.
RCD-8	Plain, Flat Lens	41332	41409	30
RCD-8	Refracting Lens	41334	41410	30

Form F—Floor Mounting

Type	Description	With Standard Glass Cat. No.	With Impact-Resisting Glass Cat. No.	Wt. Lbs.
RCD-8	Plain, Flat Lens	41424	41427	30
RCD-8	Refracting Lens	41425	.....	..

Brackets Only
For Forms F and W Floodlights

Cat. No.	Description	Cat. No.	Description
HL4242	L Bracket	HL4243	Z Bracket

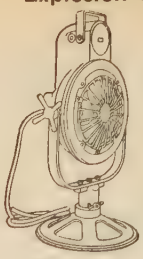
Type RCD-8 can be furnished in explosion proof type (Type RCDE-8) for use in hazardous locations.

Prices do not include incandescent lamps.

Prices upon Application

Crouse-Hinds Type RCDE-8 Floodlights
Explosion Proof—For Use in Hazardous Locations

Schedule F



Portable Unit

Designed to meet the requirements of an explosion-proof lighting unit. Recommended for lighting automobile greasing pits and lifts, and also for general use in hazardous locations. Can be supplied with mountings for fixed installation or portable use.

Can be furnished with trunnion mounting and either with or without carrying handle and wheel base. Recommended for use around oil refineries, chemical plants, and for lighting spray booths from the outside. For short range lighting, the 8-inch porcelain enameled steel reflector should be used; for longer range or for spotlight applications, the silvered glass reflector provides a narrower beam.

Has medium screw base receptacle (Cat. No. HL 6019).

The wiring chamber is separated from the floodlight housing by a wall and the point where the wires pass through the wall is sealed with a special compound. Two ¾-inch hubs are provided, one on each side of the wiring chamber. Ample room is provided for splicing. In some cases, particularly when the unit is mounted in the floor it is advisable to fill the wiring chamber with compound after making the splice. A threaded cover is provided for the wiring chamber. Thirty feet of 3-conductor No. 16 cable is furnished.

Plain, impact and heat-resisting 8½-inch lens (Cat. No. HL 5196). A refracting screen (Cat. No. HL5413), designed to refract the light in one direction, can be furnished. A heavy steel grid is provided over the lens.

Lamps are 100-watt, A-23 or PS-25; 150-watt, PS-25; or 200-watt, PS-30 bulb. For long range, narrow beam, 250-watt, G-30 bulb floodlight service lamp should be used. Unless otherwise specified, all units are furnished with lamp receptacle set for 200-watt lamp; if 250-watt lamp is to be used a special lamp receptacle and adapter are supplied.

With Trunnion Mounting—For Permanent Installation

Glass Reflector Cat. No.	Glass Reflector Schedule	Porcelain Enameled Reflector Cat. No.	Porcelain Enameled Reflector Schedule	Case	Door
41719	F	41720	F	Feraloy	Aluminum
41721	F	41722	F	Feraloy	Brass
41723	F	41724	F	Aluminum	Aluminum
41725	F	41726	F	Brass	Brass

Portable Unit

With handle, wheel base, 30 feet of 3-conductor No. 16 cable and BP-49, 2-wire, 3-pole plug.

41727	F	41728	F	Aluminum	Aluminum

Any of the above units with glass reflector can be arranged for use with 250-watt, G-30 bulb lamps without extra charge, if specified on the order.

Catalogue numbers do not include incandescent lamps.

Prices upon application.

Smooth Glass Reflectors

Diameter Inches	Used on Types	Cat. No.	Each
11½	ADA-12, ADR-12. For G-Bulb Lamp.	HL 439	$9.00
14	ADA-14	HL2889	21.00
14	FDE-12, FDS-12, FDV-12	HL6325	25.00
14	GCP-14	HL4250	22.00
16	ADA-16	HL2337	23.00
16	DCE-16, DCX-16, DCV-16	HL4132	65.00
20	LCE-1120	HL4481	35.00
24	LCE-24	HL8518	45.00

Hammered Glass Reflectors

9⅝	RM-10, RME-10, RMU-10	HL9183	$9.00
11½	ADA-12, ADR-12. For PS-Bulb Lamp	HL 749	9.00
12	RM-12, RME-12, RMU-12	HL9181	14.00
14	ADA-14	HL2890	21.00
14	GCP-14	HL3862	22.00
16	ADA-16. For PS-Bulb Lamp	HL2339	23.00
20	LCE-1120	HL4482	45.00
24	LCE-24	HL9119	45.00

Porcelain Enameled Steel Reflectors

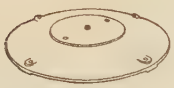
10	RM-10, RME-10, RMU-10	HL 806	$3.25
12	RM-12, RME-12, RMU-12	HL5322	7.00
12	RLS-12, RLU-12	HL8086	3.00
14	RCD-8, RCDE-8	HL4043	2.00
16	RLS-16, RLU-16	HL7867	9.00

Special Bases and Brackets
For Crouse-Hinds Floodlight Projectors
Bases
Schedule F

Pedestal Base

Bolt Base For Types ADA-14, ADE-14, ADA-16

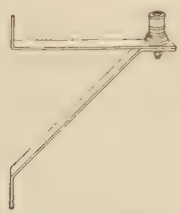
Wheel Base for Types ADA-14, ADE-14, ADA-16


Cast Aluminum Alloy Wheel Base for Types LCE-1120, LCE-24

Cat. No.	When Purchased Separately Each	When Purchased With Projector In Place of Regular Base Each	For Floodlights
Bolt Style			
HL3246	$3.00	No Extra	ADA-14, ADE-14, ADA-16
Cross-Arm Style			
HL3193	$3.00	No Extra	ADA-14, ADE-14, ADA-16
Ornamental Style			
45889	.....	.....	All Types
Pedestal Style			
HL3720	$7.50	Add $4.50	ADA-14, ADE-14, ADA-16
Railroad Style			
HL2693	$3.00	No Extra	ADA-14, ADE-14, ADA-16
Slip-Fitter Style			
*HL3091	$4.00	No Extra	ADA-14, ADE-14, ADA-16
*HL3247	6.00	No Extra	LCE-1120, LCE-24
†HL3681	6.00	No Extra	LCE-1120, LCE-24
U-Bolt Style			
HL2714	$3.75	No Extra	ADA-14, ADE-14, ADA-16
Wheel Style			
HL9462	$9.00	Add $4.00	LCE-1120, LCE-24
HL3245	3.00	No Extra	ADA-14, ADE-14, ADA-16

*4-inch size.
†2½-inch size.

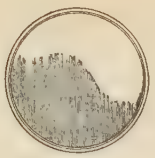
Brackets


Pole Bracket

Cat. No.	When Purchased Separately Each	When Purchased With Projector in Place of Regular Base Each	For Floodlights
‡Ornamental Style			
HL3123	$32.00	.....	For 2 LCE-1120 or LCE-24
HL3685	32.00	.....	For 2 ADA-14, ADE-14 or ADA-16
Pole Style			
HL2630	$9.00	Add $4.00	LCE-1120, LCE-24
HL2632	7.50	Add 4.50	ADA-14, ADE-14, ADA-16

‡When used with types LCE-1120 or LCE-24, purchase floodlights with HL3681 slip-fitter base. When used with type ADA, purchase floodlights with slip-fitter mounting.

Crouse-Hinds Floodlight Projector Lenses
Schedule F


Diffusing Lens

Spread Lens

All floodlight projectors listed are supplied with plain, convex, Pyrex, heat-resisting lenses. Unless another lens is specified, plain lens will be furnished. The plain lens does not alter the beam spread of the floodlight in any way.

It is often desirable to increase the natural spread of a floodlight beam either in all directions or in one direction only. To meet this condition, two different types of lenses as described below can be supplied. There is no additional charge for these lenses.

The convex, heat-resisting diffusing lens spreads the natural beam both horizontally and vertically, giving a larger light spot. This lens is used where the natural spread from the floodlight is not sufficient to cover the area desired. Diffusing lenses should not be ordered with any projector arranged for use with concentrated filament lamps, as these lamps are used to secure a narrow beam spread.

The convex, heat-resisting, spread lens spreads the light at right angles to the direction of the ribs, leaving the spread in the other direction the same. The resulting beam is elliptical in shape. When the ribs are vertical, the beam is spread horizontally and when they are horizontal, the beam is spread vertically. The lens can be set at the factory for either spread, and the order should specify which is desired. This type of lens is useful when lighting rectangular areas. The nominal beam spread produced with the standard spread lens is 45 to 50 degrees. The actual beam spread depends on the characteristics of the floodlight with which the lens is used.

To obtain the Cat. No. and list price of any lens, refer to table No. 1 for the diameter of lens required to fit the floodlight; then under table No. 2 will be found the Cat. No. and price of the style of lens of that diameter.

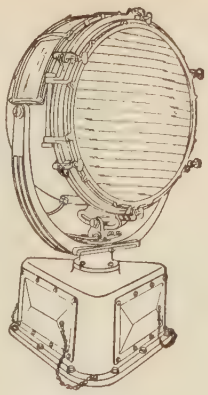
Table No. 1—Lens Diameters

Type	Diameter Inches	Type	Diameter Inches	Type	Diameter Inches
ADA-12	12	LCE-24	24¼	RLU-16	16 7/16
ADA-14	14	RAS-12	12	RM-10	10
ADA-16	16 7/16	RAS-14	14	RM-12	12
ADE-14	14	RAS-16	16 7/16	RME-10	10
FDA-12	12	RLS-12	12	RME-12	12
FDV-12	12	RLS-16	16 7/16	RMU-10	10
LCE-20	1120	RLU-12	12	RMU-12	12

Table No. 2—Lens Prices

Diameter Inches	Color	Plain Cat. No.	Spread Cat. No.	Diffusing Cat. No.	Purchased Separately Each
10	Clear	HL6813	HL6815	HL6814	$4.00
12	Clear	HL6802	HL6811	HL6803	5.00
12	Red	HL2005	HL2016	HL2012	8.00
12	Amber	HL8130	HL2019	HL2015	8.00
12	Green	HL2009	HL2018	HL2014	8.00
12	Blue	HL2006	HL2017	HL2013	8.00
12	Purple	HL2051	HL2054	HL2052	8.00
14	Clear	HL9151	HL3090	HL9153	6.50
16 7/16	Clear	HL6804	HL6810	HL6805	9.50
16 7/16	Red	HL241	.....	.....	13.00
16 7/16	Amber	HL244	.....	.....	13.00
16 7/16	Green	HL242	.....	.....	13.00
16 7/16	Blue	HL243	.....	.....	13.00
20	Clear	HL9016	HL9018	HL9017	17.00
24½	Clear	HL9019	HL9021	HL9020	35.00
25	Clear	HL2156	HL2153	.....	40.00

Type DCB24 Crouse-Hinds Airport Revolving Beacons



Conforms to requirements of the Department of Commerce. Housing, trunnion arms and base are cast aluminum alloy.

Optical system consists of 24-inch diameter, 10-inch focus precision parabolic glass reflector and 1000-watt, 115 or 30-volt, T20-bulb airway beacon lamp. Two incandescent lamps, mounted in an automatic lamp-changer, are used.

The front lens is a 1-piece, convex, heat-resisting roundel which produces a double beam of light. The main beam, consisting of 85% of the reflected light, passes straight through the lens, while the remaining beam is directed upward 25°.

Beacon revolves at 6 r.p.m.

With Automatic Lamp-Changer

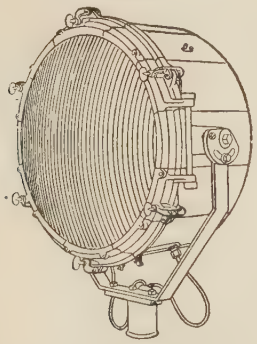
Cat. Nos. 115-V. 60-Cy. A.C.	Cat. Nos. 30-V. 60-Cy. A.C.	Description	Weight Pounds
40523	40527	With Lamp-Changer Only	311
40895	40896	With Zenith Light	322
40774	40897	With Zenith Light and On Course Flasher	334
40898	40901	With Tell-Tale Lamp Circuit	312
40899	40902	With Zenith Light and Tell-Tale Circuit	323
40900	40903	With Zenith Light, On Course Light Flasher, and Tell-Tale Lamp Circuit	335
40904	40907	With Red Indicating Light on Top	314
40905	40908	With Zenith Light and Red Indicating Light on Top	325
40906	40909	With Zenith Light, On Course Light Flasher, and Red Indicating Light	337

Without Automatic Lamp-Changer

40524	41032	Revolving Beacon Only	307
40526	41033	With Zenith Light	318
40530	41034	With Zenith Light and On Course Flasher	331

Type DCE-24 Crouse-Hinds Airport Floodlights

Schedule F



Type DCE-24 Airport Floodlight is used to light the landing area of an airport with from 3 to 8 floodlights grouped together, and the beams overlapped.

Furnished with a commercial precision mirrored glass reflector, 25 inches in diameter.

The housing is cast aluminum non-corroding alloy, one-piece, non-ventilated, dust-tight and weatherproof.

The door frame is hinged at side and clamped to the housing with 6 rugged C clamps.

Spread convex heat-resisting lens giving horizontal beam spread of approximately 40° or 80° can be furnished.

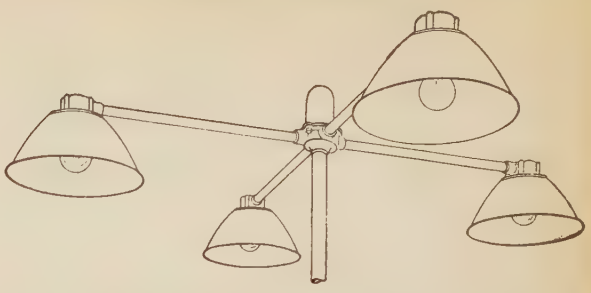
The focusing mechanism is 3-way, operated from outside of housing.

Louvers or vanes are attached to the door frame and are designed to cut off all direct lamp rays above the horizontal.

Type	Cat. No.	Description	Lamp Watts	Lamp Volt	Lamp Bulb	Wt. Lbs.
DCE-24	40775	With 40° Spread Lens	3000	32	GT-38	122
DCE-24	40783	With 80° Spread Lens	3000	32	GT-38	122

Prices upon application.

Type APW-3 Crouse-Hinds Airport Wind Cone Fixtures



Every airport should be equipped with one or more wind direction indicators so that a pilot taking off or landing can readily ascertain the wind direction.

The wind direction indicator should be illuminated at night and the Crouse-Hinds Type APW-3 wind cone fixture is correctly designed to illuminate the wind cone. It consists of four weatherproof condulets with suitable deep bowl reflectors for 100-watt lamps, and an obstacle light mounted in the center of the cross.

The obstacle light is tapped on the bottom for a 1-inch supporting pipe, and has four ¾-inch hubs 90° apart for the arms supporting the condulets with reflectors.

The length of the arms between the center obstacle light and the condulets on the arms should be governed by the length of the wind cone and the distance the cone is below the lighting units. Arms from 2 to 4 feet long are necessary.

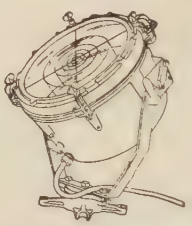
Reflectors take 100-watt, 115-volt, A23-bulb lamps. Obstacle lights take 60-watt, 115-volt, A21-bulb lamps.

Cat. No.	Description	Weight Pounds
APW-3	Wind Cone Fixture Complete, Less Conduit	30
VAPX32175	Obstacle Light Only	4¾
V2847-S4	Condulet and Reflector Only	6½

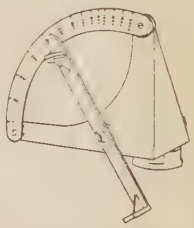
Prices upon application.

Crouse-Hinds Ceiling Height Projectors and Indicators

Schedule F



Type DCE-14 Projector with Flange Base



Ceiling Height Indicator

Every airport should be equipped with a ceiling projector and a ceiling height indicator by means of which the ceiling, or height of the clouds above ground, can be measured.

Projector is a powerful searchlight, the beam of which is pointed upward to the clouds, and indicator is a quadrant graduated directly in feet.

Projector has cast aluminum alloy housing, 14-inch diameter parabolic glass reflector, heat-resisting lens.

System of louvers cuts off all spill light.

Type DCE-14 Ceiling Height Projector

Cat. No.	Description	Lamp Watts	Lamp Volt	Lamp Bulb	Wt. Lbs.
40923	With 4-Inch Slip-Fitter	500 or 1000	115	T-20	90
40514	With Flange Base	500 or 1000	115	T-20	90

Ceiling Height Indicator

Cat. No.	Description	Wt. Lbs.
40539	With 4-Inch Screw-Fitter	55

Catalogue numbers do not include incandescent lamps.

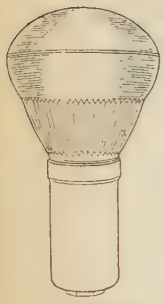
If specified, Type DCE-14 projector can be equipped with lamp receptacle for use with prefocused base lamps.

Prices upon application.

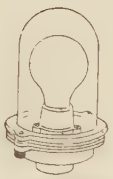
Crouse-Hinds Airport Boundary, Obstacle and Approach Lights

For Series or Multiple Circuits

Schedule F



No. VAW5440



No. VAP3170

No. VAP6491

It is customary to outline a landing field with boundary lights so that a pilot will know the shape and extent of the field. These boundary lights should either have frosted globes or be used with frosted lamps.

All multiple lamps which are used in boundary light circuits have inside frosted bulbs so that clear enclosing globes are desirable.

Red globes should be used on all obstacle lights. Green globes should be used on approach lights to mark the best approaches to the field.

Housing is cast aluminum. Guards can be furnished for the fixtures equipped with the plain globes. No guards are available for the units with the Holophane globes.

In all of these fixtures the globe seats on a rubber gasket. In the case of the plain globe units another gasket is used between the globe flange and the retaining ring or guard to further protect the glass.

Sufficient space is provided in the base of all units for convenience in making the electrical connections.

Series Circuit

Take 6.6-ampere, 600 or 1000-lumen, S-24½ clear bulb lamp.

Plain Globe—1½-Inch Hub

Description	Complete: Frosted Globe	Green Globe	Red Globe
Without Guard	VAP5471	VAP5472	VAP5475
With Guard	VAP5491	VAP5492	VAP5495
Plain Globe—2-Inch Hub			
Without Guard	VAP6471	VAP6472	VAP6475
With Guard	VAP6491	VAP6492	VAP6495

Holophane Globe—1½-Inch Hub

Description	No. Globe	Complete: Clear Globe	Green Globe	Red Globe
Guard Cannot be Furnished	VAW544	VAW5440	VAW5442	VAW5445

Multiple Circuit

Equipped with medium screw receptacle.

Plain Globe—1-Inch Hub
25-Watt, 115-Volt, A-19 Bulb to 60-Watt, 115-Volt, A-21 Bulb

Description	Complete: Clear Globe	Green Globe	Red Globe
Without Guard	VAP3170	VAP3172	VAP3175
With Guard	VAP3190	VAP3192	VAP3195
60 to 100-Watt, 115-Volt, A-25 to A-23 Bulb			
Without Guard	VAP3370	VAP3372	VAP3375
With Guard	VAP3390	VAP3392	VAP3395

Holophane Globe—1-Inch Hub
25-Watt, 115-Volt, A-19 Bulb or 50-Watt, 115-Volt, A-21 Bulb

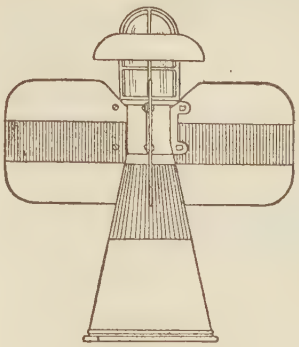
Description	No. Globe	Complete: Clear Globe	Green Globe	Red Globe
Guard Cannot be Furnished	VAW311	VAW3110	VAW3112	VAW3115
Holophane Globe—1½-Inch Hub 150-Watt, 115-Volt, PS-25 Bulb				
Guard Cannot be Furnished	VAW5	VAW5520	VAW5222	VAW5225

The 100-watt multiple fixture with plain globe can be furnished with a 1½-inch hub if stated on the order.

Prices upon Application

Type APB Crouse-Hinds Disconnecting Boundary, Obstacle, and Approach Lights

With Spring Clip Series Receptacle



This light consists of two parts: a ground receptacle which is permanently fixed in the ground, and to which the underground cable is connected; and the boundary light itself. The disconnecting boundary light takes the form of a cone of metal with suitable wings, on top of which the boundary light is mounted and, when struck by a ship, the light is merely pulled from its ground receptacle and falls over on the ground. The ground receptacle is of the series type, and when the disconnecting boundary light is pulled from the receptacle, the circuit is immediately restored. A ship striking one of these lights cannot be seriously damaged, since only a little force is required to push the boundary light over.

The standard is a cone of metal 12 inches in diameter and 24 inches high, equipped with four wings 12 inches square, thus making it much more visible than the ordinary pipe standard. The light can be equipped with a guard around the enclosing globe and a reflector attached to the guard which collects the light from the lower half of the lamp and throws it downward on the cone and wings, thus materially increasing the visibility at night, The light is thus thrown not only on the wings and cone but also on the ground immediately adjacent to the boundary light. In the bottom of the cone there is a bead which engages three springs having sufficient tension to prevent the wind from blowing over the boundary light.

The ground receptacle which holds the short circuiting spring clip series receptacle also forms a support for the cone. The design of the plug and receptacle is such that surface water on the field cannot get to the contacts, and when the boundary light is knocked over a door comes down over the receptacle and closes the opening. The housing of the ground receptacle is made of heavy cast feraloy finished in black enamel. The disconnecting boundary light is made of cast aluminum together with a cast bronze guard and cast aluminum reflector. The cone and wings are made of lead-coated Armco Iron, or Keystone Copper Steel and will resist corrosion for a long time. The cable from the boundary light fixture to the disconnecting plug is extra heavy weatherproof cable, and the plug is equipped with a suitable watertight stuffing box. The cable is securely anchored to the boundary light. There is a hand hole in the side of the boundary light cone through which it is possible to reach the receptacle and insert the plug to complete the circuit.

A field one mile square can be bounded with Type APB disconnecting boundary lights without the use of line insulating transformers, resulting in a much cheaper installation on large fields.

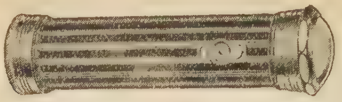
Takes 600 or 1000-lumen, S24½-bulb, 6.6-ampere series lamps.

With Ground Receptacle

Cat. Nos. With Reflector	Cat. Nos. Without Reflector or Guard	Description	Wt. Lbs.
40944	40877	Boundary Light, Frosted Enclosing Globe	45
40945	40878	Boundary Light, Amber Enclosing Globe	45
40946	40879	Approach Light, Green Enclosing Globe	45
40947	40880	Obstacle Light, Red Enclosing Globe	45
Without Ground Receptacle			
HL2200	HL2093	Boundary Light, Frosted Enclosing Globe	28
HL2201	HL2094	Boundary Light, Amber Enclosing Globe	28
HL2202	HL2095	Approach Light, Green Enclosing Globe	28
HL2203	HL2096	Obstacle Light, Red Enclosing Globe	28
Ground Receptacle Only			
HL2075		Complete with Housing for Disconnecting Lights	17

Cat. Nos. do not include incandescent lamps.
Prices upon application.

No. 2639 Eveready Special Flashlights



Case is silver and black striped. Size, 6¾x1½ inches.
Uses 2 No. 950 batteries and No. 7161 Mazda lamp.

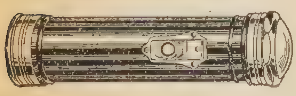
No. **2639**, Complete with Batteries..............each **$.45**

No. 2649 Eveready Focusing Flashlights

Case is silver and black striped. Size, 6⅛x1½ inches.
Uses 2 No. 950 batteries and No. 1161 Mazda lamp.

No. **2649**, Complete with Batteries..............each **$.59**

No. 2604 Eveready Tubular Flashlights

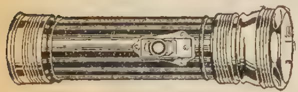


Furnished in black only. Bulls-eye lens; octagonal lens ring and safety-lock switch. Equipped with ring hanger. Size, 6¾x1½ inches. Use two No. 950 unit cells; No. 1161 Eveready Bulb; No. 14 Mazda Bulb. Unit package, 1.

No. **2604**, without Batteries....................each **$.75**

No. 2671 Eveready Flashlights

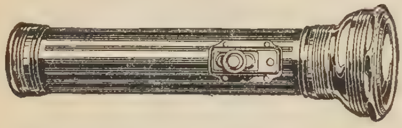
400-Foot Range



A 2-cell focusing flashlight, equipped with octagonal lens ring, lens retaining ring, safety-lock switch and ring hanger. Finish, black. Size, 7x1½ in. Use unit cell No. 590; lamp No. 1611. Unit package, 4.

No. **2671**, Without Batteries...................each **$1.05**

No. 2619 Eveready Miners' Flashlights



Black metal case; beveled lens; octagonal lens ring and safety-lock switch.

Equipped with ring hanger.

Size 1½x8⅞ inches.

Use 3 No. 950 unit cells; No. 1162 Eveready Bulb; No. 17 Mazda Bulb.

Unit package, 1.

Price does not include batteries.

No. **2619**.....................................each **$1.45**

No. 2672 Eveready Focusing Flashlights

500-Foot Range

A 3-cell flashlight with beveled lens; octagonal lens ring with safety lock switch. Equipped with focusing device. Light can be focused to as sharp a point as desired merely by turning the end cap.

Has black metal case.

Size, 1½x9¼ inches.

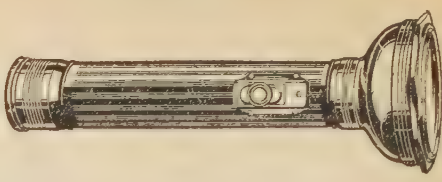
Use unit cell No. 950. Use lamp No. 1162.

Unit package, 1.

No. **2672**, Without Batteries...................each **$1.45**

No. 2642 Eveready Focusing Flashlights

800-Foot Range



A 3-cell flashlight equipped with focusing device and parabolic silvered reflector, non-rolling lens ring.
Black metal case with nickel-plated fittings.
Size, 9½x1½ inches.
Use unit cell No. 950. Use lamp No. 1162.
Unit package, 1.

No. **2642**, without Batteries...................each **$2.20**

No. 2645 Eveready Flashlights

5-Cell, Focusing

Used wherever exceptional power and range must be combined with portability. A few turns of end cap make light suitable for close up work, beam changing from a narrow penetrating shaft of light to a diffused and widespread ray.

Has beveled plate-glass lens, octagonal non-rolling lens ring, safety-lock switch, ribbon-design case and new ring hanger. Made in nickel-plated finish only. Size 14½x1½ inches. Use 5 No. 950 unit cells; No. 1163 bulb.

No. **2645**, without Batteries ....each **$2.50**

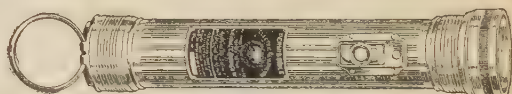
No. 2647 Eveready Special Focusing Flashlights

2000-Foot Range

This powerful flashlight is ruggedly constructed and low-priced.
Case is silver and black striped.
Uses 5 No. 950 Eveready batteries and Eveready Mazda lamp No. 1168.
Size, 14¼x1½ inches. Packed in individual cartons.

No. **2647**, without Batteries...................each **$1.00**

No. 2695 Eveready Mine Safety Flashlights

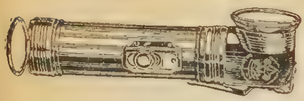


A 3-cell safety light, nickel finish. Size, 9¼x1½ inches.
Classified as permissible by Bureau of Mines, U.S. Department of Commerce, and carries Underwriters Laboratories' approval for use in Methane and air mixtures, and gasoline vapor.

Bulb is spring mounted and is so arranged that if the bulb glass is shattered the electric circuit will be instantly opened before the lamp filament can ignite inflammable or explosive mixtures of gases in the surrounding atmosphere. Fitted with a special lens made of extra heavy glass and a special projecting lens ring.
Unit package, one.

No. **2695**, Without Batteries...................each **$3.95**

No. 2697 Eveready Boy Scout Flashlights



A 2-cell focusing light finished in khaki and equipped with ring hanger, belt clip and safety-lock switch. It carries the official Boy Scout insignia.

Size 7⅜x1½ inches.

Use two No. 950 unit cells; No. 1161 bulb.

No. **2697**, without Batteries....................each **$1.30**

Eveready Flashlights with Ring Hangers

All Eveready Flashlights, with the exception of pocket and lantern types, are now equipped with the ring hanger.

All Eveready Flashlights, both black and nickel, are furnished with ribbon design cases.

These are exclusive Eveready features.

Eveready Unit Cells

No. 950

The hours of service are definitely guaranteed.

No....................	**935**	**950**
Each..................	**$.10**	**.10**
No. of Cells...........	1	1
Size Cells ....in.	1 31/32x1 1/32	2 27/64x1 11/32
No. in Unit Package....	12	48

No. 409 Eveready Lantern Batteries

A 4-cell lantern battery for use in railroad lanterns.

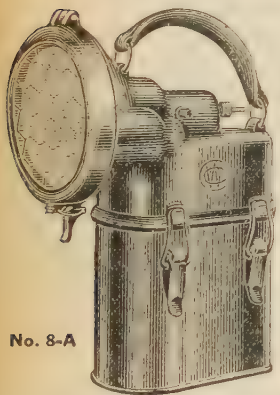
Size, 3 29/32x2¾x2¾ inches.

Unit package, 1.

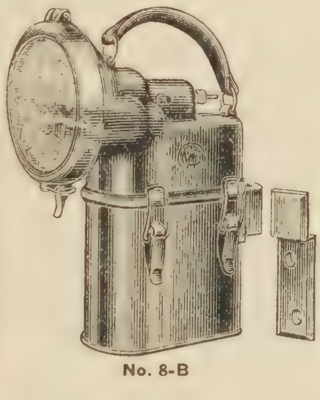
Weight, 22 ounces.

No. **409**.............................each **$.40**

Excellight Portable Searchlights

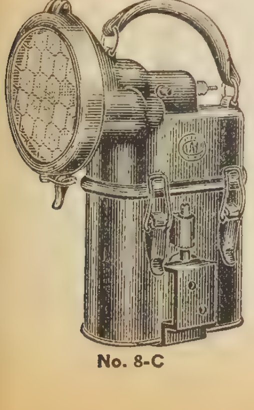


No. 8-A



No. 8-B

This weatherproof light gives either a powerful concentrated searchlight effect that will pierce dense smoke or darkness or may be immediately changed to a diffused spreading light. Furnishes a ray of light that will show the way for a distance of 600 feet. The possibility of giving any lighting effect between these two extremes makes this searchlight invaluable.



No. 8-C

Height, 11 inches.

Furnished with two No. 6 dry cells.

No. **8-A**, Wt., 7½ Lbs. ea. **$12.50**
No. **8-B**, Wt., 8½ Lbs. ea. **14.50**
No. **8-C**, Wt., 8½ Lbs. ea. **14.50**
Adjustable Shoulder Straps..........each **1.50**
Extra Bulbs.......each **.50**

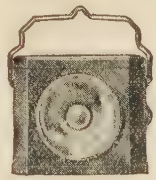
No. 3 Eveready Pocket Lights

A press on the button and entire lens slides forward and becomes fully illuminated; depress lens and light goes out.

Polished nickel case decorated with black and red enamel. Size, 2½x1⅝x⅝ inches. Uses 1 No. 706 Eveready battery and No. 1180 Mazda lamp.

No. **3**, without Batteries...........each **$.85**

No. 10 Eveready Spotlight Lanterns



Case is red enameled; bail, switch and reflector are nickel-plated.

Size, 2⅝x2⅜x1⅜ inches.

Uses 2 No. 935 batteries and solid glass spotlight lamp No. 1174.

No. **10**, Complete..............................each **$.59**

No. 1653 Eveready French Colonial Electric Candles

For use on the dinner table, telephone stand, in the nursery or sick room, etc.

Has a rich satin, silverlike finish, known as Butler finish.

Height, .. inches; width at base, .. inches.

Uses 2 No. 935 Eveready batteries and No. 1173 Mazda lamp.

Unit package, 3.

No. **1653**, without Batteries...................each **$1.80**

No. 1654 Eveready Electric Candles

A switch in the base automatically turns the light on or off each time it is picked up or set down. It can be turned on permanently if a permanent light is desired for use on dinner tables, telephone stands, etc.

Has a rich satin silverlike finish, known as Butler finish. Bulb is housed in a casing of moonstone glass.

It is equipped with a band containing radium spots so that it can be easily located in the dark.

Height, 6⅝ inches. Width at base, 2 6/7 inches. Use unit cell No. 935. Use lamp No. 1197.

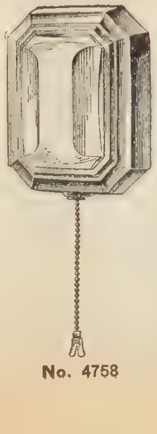
Unit package quantity, 6.

No. **1654**, Including Lamp and Batteries..................each **$1.00**

Eveready Wallites

For use any place where regular wired outlets are not desired or are impossible.

Finished in ivory. Unit package, 3.



No. 4758

No. 4757

Size, 5¾x3⅜x2¼ inches. Uses 2 No. 950 Eveready batteries and No. 1166 Mazda lamp.

No. **4757**, without Batteries....each **$1.30**

No. 4758

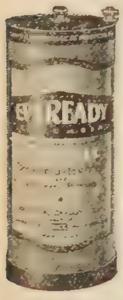
Gives twice as much light as No. 4757. Equipped with time-switch which automatically turns off light after a short period, preventing battery waste. Light can also be left on indefinitely if desired.

Size, 6x4½x2½ inches. Uses 3 No. 950 Eveready batteries and No. 1167 Mazda lamp.

No. **4758**, without Batteries....each **$1.65**

No. 6 Eveready Columbia Ignitor Dry Cell

With Screw Connections



A special high grade cell designed for all heavy service. It is particularly adapted for motor ignition. A set of ignitors will keep the engine running smoothly until every bit of current is exhausted.

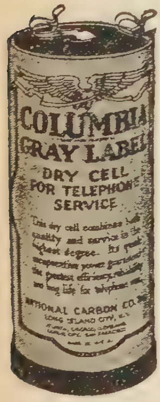
Equally satisfactory for motor boats, gas engines, and in fact, any service where a reliable, long life battery is needed.

These batteries are carefully packed from fresh stock, and guaranteed to reach their destination in perfect condition.

Voltage, 1½.
Width, 2½ inches.
Height, 6 inches.
Packed 25 to a standard package.
Weight of standard package, 57 pounds.

No. 6.......................each **$.37**

Columbia Gray Label Dry Cell



This battery is especially designed for telephone work and light-drain service.

Fahnestock spring binding posts are furnished without extra charge when requested.

Voltage, 1½.

Diameter, 2½ inches.

Height, 6 inches.

Quantity in standard package, 50.

Approximate weight of standard package, 120 pounds.

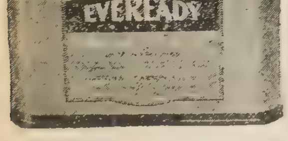
Price.......................per cell **$.35**

No. 6 Hercules Dry Cell Batteries

This battery is reasonably priced and will offer satisfactory service under all conditions.

No. 6.......................each **$.27**

Eveready Columbia Hot Shot Batteries



Cells are connected by soldered copper strips and encased in a single metal container. The advantages of this new type covering are the ability to withstand rough usage, water-proof, thoroughly insulated to prevent internal short circuits and a woven fabric handle for convenience in carrying.

Cat. No.	Each	Voltage	Dimensions, Inches Length	Width	Ht.	Std. Pkg. Quantity in Box	Approx. Wt., Lbs. Std. Pkg.
1461	$1.90	6	10 7/16	2¾	6¾	6	60
1462	1.90	6	5⅜	5⅜	7½	6	64
1562	2.15	7½	7⅞	5	6¾	8	107
1662	2.60	9	7 13/16	5¼	6¾	8	124

GraybaR QUALITY
Everything Electrical
GraybaR
ELECTRIC COMPANY
OFFICES IN ALL PRINCIPAL CITIES

No. A-600 Eveready Air Cell A Batteries

For Air Cell Receivers

An air depolarized constant voltage, non-rechargeable primary battery, especially made only for use as the A battery for air cell receivers.

Capacity is sufficient to operate an approved receiver for at least 1000 hours. Uses liquid electrolyte, but is shipped dry, and so undergoes no depreciation until activated. It is activated for service by filling with water.

Length, 13½ inches; width, 6¾ inches; height over all, 11 inches. Capacity, 600 ampere-hours; maximum load to which battery should be submitted, 650 milli-amperes.

Weight: dry, 25 pounds; filled with water, 37 pounds.

No. A-600.......................each **$8.50**

No. 768 Eveready B Batteries

Horizontal Type, 22½ Volts

Suitable for portable sets where light weight and small size are essential, and for self-contained sets having battery compartments too small to permit the installation of a larger B battery.

It has plus 6, plus 18 and plus 22½-volt taps, which permit of its use as a C battery in connection with power tubes.

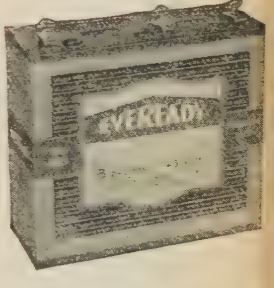
Length, 4 1/16 inches; width, 2 9/16 inches; height, 2¾ inches.

Weight, 1 pound, 9 ounces.

No. 768.......................each **$1.25**

No. 485 Eveready Layerbilt Radio B Batteries

Vertical Type, 45 Volts, Medium Size



Made of flat layers of current producing elements compressed one against another, so that every cubic inch inside the battery case is completely filled with electricity-producing material.

Equipped with 3 Fahnestock clips giving voltages of 22½ and 45.

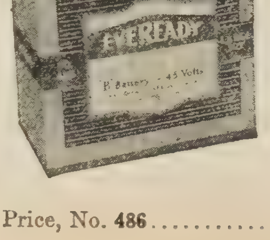
This battery is 8 3/16 inches long, 3¼ inches wide and 7⅛ inches high.

Weight, 9½ pounds.

Price, No. **485**.......................each **$1.95**

No. 486 Eveready Layerbilt Radio B Batteries

Vertical Type, 45 Volts, Heavy Duty



Made of flat layers of current-producing elements compressed one against another, so that every cubic inch inside the battery case is completely filled with electricity-producing material. For sets of 4 tubes or more.

Equipped with 3 Fahnestock Clips giving voltages of 22½ and 45.

Length, 8⅛ inches; width, 4¾ inches; height, 7 5/16 inches.

Weight, 14¼ pounds.

Price, No. **486**.......................each **$2.50**

Eveready Round Cell Radio B Batteries

No. 570, Large Size, Vertical Type, 45 Volts

This battery is of cylindrical cell construction.

Length, 8¼ inches; width, 4½ inches; height, 8 inches.

Weight, 13¾ pounds.

No. **570**................each **$1.80**

No. 572, Medium Size, Vertical Type, 45 Volts

Recommended for self-contained sets where lack of space will not permit the use of large size batteries. Cylindrical cell construction.

Length, 8¼ inches; width, 3¼ inches; height, 8 inches.

Weight, 9 pounds.

No. **572**....................................each **$1.35**

Eveready Round Cell Radio B Batteries

No. 870, Large Size, Vertical Type, 45 Volts

This battery is of cylindrical cell construction.

Length, 8¼ inches; width, 4½ inches; height, 8 inches.

Weight, 13¾ pounds.

No. **870**...........each **$2.15**

No. 872, Medium Size, Vertical Type, 45 Volts

Recommended for self-contained sets where lack of space will not permit use of larger size batteries. Cylindrical cell construction.

Length, 8¼ inches; width, 3¼ inches; height, 8 inches.

Weight, 9 pounds.

No. **872**....................................each **$1.65**

No. 771 Eveready Radio C Batteries

Vertical Type, 4½ Volts

A 4½-volt unit, containing 3 cells provided with 4 Fahnestock spring clip terminals.

May be used in either the filament or A circuit, the plate or B circuit or the grid or C circuit.

A 4½-volt C battery is sufficient with most tubes when B battery voltages of not over 80 or 90 volts are used, and the signal is ordinarily loud. For B battery voltages up to 120 volts, from 6 to 9 volts of C battery gives better results.

Length, 4 inches; width, 1⅜ inches; height, 3 1/16 inches. Weight, 14 ounces.

No. **771**....................................each **$.35**

No. 7111 Eveready Dry Cell Radio A Batteries

Vertical Type, 1½ Volts

A single 6-inch dry cell battery having 2 screw knurls and put up in an attractive round paper jacket.

Connected in various combinations to meet the requirements of WD-11, UV-199 and all other dry cell tubes.

Furnished in round jackets and with screw knurls.

Initial voltage of 1½ volts.

Width, 2½ inches; height, 6 inches.

Standard package, 25.

Weight, standard package, 57 pounds.

No. **7111**....................................each **$.40**

Edison Primary Cells

Edison Primary Cells are furnished in capacities ranging from 75 to 1000-ampere hours. The sizes best adapted for telephone work are 75, 250 and 500-ampere hour types, for average conditions, and the 1000-ampere hour cells for heavy duty service or when it is desirable to bring the renewal periods far apart.

The characteristics of this battery, which make it particularly well suited for telephone service, are: Uniform voltage under continuous discharge; extremely low and constant internal resistance; freedom from depreciation when the circuit is open; long life, with no attention between renewals; indicator panels in plates, which accurately show the approach of exhaustion in ample time to arrange for renewal and suitability for either open circuit (intermittent discharge) or closed circuit (continuous discharge) work.

The initial open circuit voltage of all Edison Primary Cells is 0.9. The closed circuit voltage averages 0.60 to 0.65 depending on the rate at which the cells are discharged.

Use of Cells

Edison Primary Cells are used extensively for the following purposes: Local battery telephone exchange switchboards; telephone train dispatching (talking circuits); intercommunicating telephone systems; small common battery telephone systems; private branch exchange switchboards; pole changers, supervisory lamps and relays; telegraph work (local sounder and main line circuits); railway signals and crossing bells; railway interlocking plants; gas and gasoline engine ignition; low voltage motors; battery dental engines; fire, police and burglar alarms; auxiliary fire alarm systems (closed circuit); mine signals, bell systems and annunciators; program and self-winding clocks; electroplating; highway beacon lighting; chemical analysis and other school work.

The A. C. Primary System

Edison Primary Cells are regularly used as a standby battery where a.c. power normally energizes low voltage lights or other apparatus. A power off relay throws the load on the battery when the a.c. fails. Uninterrupted operation may be maintained indefinitely because the attendant can always determine, by visual inspection, the available capacity of the standby battery.

Maximum Recommended Discharge

Ampere Hour Cells	Description	Max. Recommended Discharge Amperes	
		Continuous	Intermittent
75	....	0.65	1.0
200	All Types	1.00	1.5
250	....	1.00	1.5
500	All S Types	2.00	3.0
500	All M Types	2.50	3.0
1000	M Type	4.00	6.0

Type 75 Edison Primary Cells

Capacity, 75-Ampere Hours

Well suited for telephone work. Adapted to all classes of service where dependable capacity, uniform voltage and reliability are necessary requisites.

With round glass jar. Size overall, 3x7½ inches.

At a continuous discharge of 100 milliamperes this cell will deliver 80 ampere hours to a cut-off voltage of .6.

When the battery exhausts it is customary to replace with new cells and discard the entire exhausted battery; expensive jars or heat-resisting glass are not used with this type.

Price, Type **75**................................each **$.90**

Type S-202 Edison Primary Batteries
Capacity, 200 Ampere Hours

Furnished with rectangular heat-resisting glass jar. Size over all, 3⅜x6x11 inches. Inside dimensions of jar only, 2⅞x5¼x9 inches.

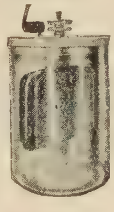
Adapted for intercommunicating telephone systems, railway train dispatching systems, stationary gas or gasoline motors, electric clock systems, small motors, etc.

Use five cells for stationary gas or gasoline motors having make and break ignition and eight cells for jump spark. Recommended for stationary work only.

Type	Description	Price, Each
S-202	Complete Cell	$3.40
S-200	" Renewal	1.50
	Renewal Parts	
S-200	Element Assembled	1.35
200	Can Caustic Soda	.24
200	Bottle Battery Oil	.09

Type S-206 Edison Primary Batteries
Capacity, 200 Ampere Hours

Made with heat-resisting glass jar and rubber gasket ring. Size over all, 5¾x9¾ inches. Inside dimensions of jar only, 5x7½ inches. Adapted for motor boat ignition. Use five cells for single cylinder make and break engines; six cells for multiple cylinder, high speed make and break engines; eight cells for jump spark. The cover is fitted with a rubber gasket to prevent splashing. Type S-206 supersedes old Type VP cell.



Type	Description	Price, Each
S-206	Complete Cell	$3.75
S-200	" Renewal	1.50
	Renewal Parts	
S-200	Element, Assembled	1.35
200	Can Caustic Soda	.24
200	Bottle Battery Oil	.09

Type S-208 Edison Primary Batteries
Capacity, 200 Ampere Hours

With heat-resisting glass jar. Size over all, 5¾x9¾ in. Inside dimensions of jar only, 5x7½ inches.

Adapted for stationary gas or gasoline engines, electric motors, burglar alarms, bell systems, program and self-winding clocks, annunciators, electric time stamps, mine signals, intercommunicating telephone systems, etc. Use five cells for stationary engines having jump spark ignition.

Cells have flat cover, without gasket and are recommended for stationary work only.

Type S-208 supersedes old Type Q cell.

Type	Description	Price, Each
S-208	Complete Cell	$3.55
S-200	" Renewal	1.50
	Renewal Parts	
S-200	Element, Assembled	1.35
200	Can Caustic Soda	.24
200	Bottle Battery Oil	.09

Type S-252 Edison Primary Batteries
Capacity, 250 Ampere Hours

With rectangular heat-resisting glass jar. Size over all, 3⅜x6x12½ inches. Inside dimensions of jar only, 2⅞x5¼x10 inches.

Type S-252 cells are the most desirable of the smaller sizes, because of the small space occupied, and on account of the element being suspended high in the solution they are particularly efficient. They are designed for stationary work, but when used in trays are semi-portable.

Particularly adapted for telephone transmitter and fire-alarm service.

Type	Description	Price, Each
S-252	Complete Cell	$3.60
S-250	" Renewal	1.70
	Renewal Parts	
S-250	Element, Assembled	1.55
250	Can Caustic Soda	.27
250	Bottle Battery Oil	.09

Type S-305 Edison Primary Batteries
Capacity, 300 Ampere Hours

With round heat-resisting glass jar. Size over all, 6¾ x 10¼ inches. Inside dimensions of jar only 6 x 8 inches.

Adapted for stationary gas or gasoline engines, burglar alarms, bell systems, program and self-winding clocks, auxiliary and industrial fire alarm systems, etc. Also for telephones, including intercommunicating telephones, private branch exchanges, switchboards, railway telephone train dispatching at busy way stations, and similar service.

Type	Description	Price, Each
S-305	Complete Cell, with Heat-resisting Jar	$3.80
S-300	Complete Renewal	1.90
	Renewal Parts	
S-300	Element, Assembled	1.75
300	Can Caustic Soda	.30
300	Bottle Battery Oil	.09

Types S-502 and M-502 Edison Primary Cells
Capacity, 500-ampere Hours

The 500-ampere hour cells are furnished with either multiple or single plate elements. The letter M before the reference number indicates multiple plate, 2 copper-oxide and 3 zinc plates. The letter S indicates single plate, 1 copper-oxide and 2 zinc plates.

The cells are used for telephone and telegraph service; railway signal, fire and burglar alarm systems, highway beacons, and in many other fields where a high capacity cell is desirable.

For service in which the load frequently goes to 3 amperes, or where the cells are exposed to low temperature, the multiple plate cells are recommended. For service in which the load does not go over 2½ amperes and the cells are protected from the cold, the single plate type will fully meet the requirements. Initial open circuit voltage, 0.9. Average closed circuit voltage 0.6 to 0.65 per cell. Maximum recommended continuous current for single plate types, 2 amperes; for multiple plate types, 2.5 amperes. Maximum recommended intermittent current for either types, 3 amperes.

Type S-502
Single Plate Element

With rectangular heat-resisting glass jar. Size over all, 5¾x6¾x12¼ inches. Inside dimensions of jar only, 5x6x10 inches.

M-502

Type	Description	Price, Each
S-502	Complete Cell	$4.40
S-500	" Renewal	2.15
	Separate Parts	
502	Jar	$2.20
502	Cover	.45
...	Wing Nuts and Washers ...per set	.20
S-500	Element	1.90
500	Caustic Soda......per can	.42
500	Oil.........per bottle	.09

For Type M-502 cell, renewal and element, add 20 cents. Prices of the other parts are the same.

GraybaR QUALITY SINCE 1869
Distributed and guaranteed by
GraybaR ELECTRIC COMPANY

Types S-504 and M-504 Edison Primary Cells

Capacity, 500-Ampere Hours

For telephone and telegraph service, railway signal, etc. With barrel-shaped heat-resisting glass jar. Size over-all, 7x12 1/4 inches; inside dimensions of jar, 6x10 inches.

Type	Description	Price Each
S-504	Complete Cell	$4.00
S-500	Complete Renewal	2.15
	Separate Parts	
504	Jar	$2.10
504	Cover	.55
....	Wing Nuts and Washers ... per set	.20
S-500	Element	1.90
500	Caustic Soda ... per can	.42
500	Oil ... per bottle	.09

For Type M-504, cell, renewal and element, add 20 cents.

Types S-507 and M-507 Edison Primary Cells

Capacity, 500-Ampere Hours

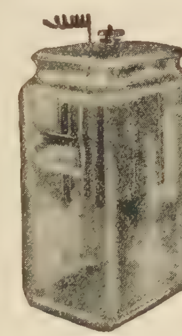
For traffic signals and other classes of work where there is a possibility of rough usage. Has cylindrical enameled-steel jar. Size overall, 7 1/4x12 inches.

Type	Description	Price, Each
S-507	Complete Cell	$4.40
S-500	Complete Renewal	2.15
	Separate Parts	
S-507	Jar	$2.00
S-507	Cover	.55
S-507	Rubber Gasket	.20
S-507	Clamps ... set of 3	.75
.....	Wing Nuts and Washers per set	.20
S-500	Element	1.90
500	Caustic Soda ... per can	.42
500	Oil ... per bottle	.09

For Type M-507 cell, renewal and element, add 20 cents.

Type M-1002 Edison Primary Cells

Capacity, 1000 Ampere Hours



The 1000 ampere hour cells are furnished with either rectangular or cylindrical jars. Type M-1001 is the specification for the cell with the cylindrical jar and M-1002 for the rectangular. The prices are the same.

This size was developed to meet demand for a battery that would operate efficiently in classes of service where heavy discharges are required for long periods. In railway signaling these cells are used for operating remote controlled switch movements, color light signals and track circuits. In the general trade for any heavy duty work or where it is desirable to bring the renewal periods as far apart as possible.

Initial open circuit voltage, 0.9 per cell; the average closed voltage, 0.6 to 0.65. The cells can be discharged continuously up to 4 amperes and intermittently up to 6 amperes.

Type M-1002

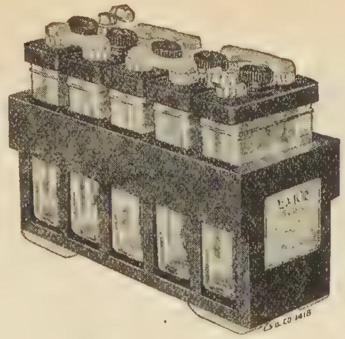
With rectangular heat-resisting glass jar. Size over all, 6 1/2x8 3/8x14 inches. Inside dimensions of jar only, 5x6x12 3/4 inches.

Type	Description	Price, Each
M-1002	Cell Complete	$7.75
M-1000	" Renewal	4.25
	Separate Parts	
1002	Jar	$4.80
1002	Cover	.55
....	Wing Nuts and Washers ... per set	.20
M-1000	Element	3.50
1000	Caustic Soda ... per can	.85
1000	Oil ... per bottle	.09

Type M-1001

With cylindrical heat-resisting jar. Prices same as for Type M-1002.

Exide Storage Batteries



BTMH Chloride Type

Exide Storage Batteries are made in a wide variety of sizes and types to meet the requirements of various kinds of power applications where a reliable source of direct current at steady voltage is required either constantly, intermittently or to tide over occasional interruptions in the normal power supply. There are three types of Exide Batteries made for these requirements.

The Chloride Type is built primarily for durability. Where long life and freedom from care and attention, together with dependability, are the deciding factors, this type of battery invariably receives the first call.

The Pasted Plate Type furnishes greater capacity in the given space than the Chloride Type.

The outstanding feature of the Ironclad Type battery is its unique positive plate which is totally different in construction from that of any other positive plate. In performance and longevity this type of Exide is second only to that of the famous Chloride.

Types BTMH, CTMH, PTMH, ETMH, BTE and KZHG are furnished in painted wooden crates, all but the first two types being equipped with carrying handles. Each crate assembly contains one cell equipped with pilot balls which roughly indicate the state of charge.

Cells of greater capacity than listed below are available in sealed glass jar assembly up to 1064 ampere hours at the 8-hour discharge rate.

Batteries are shipped charged and filled with electrolyte.

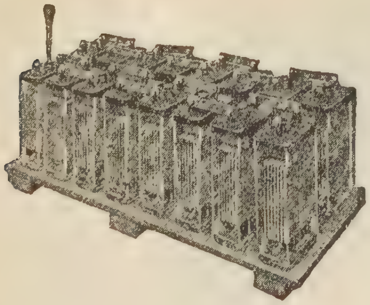
Type		No. of Cells	*Assembled, Sealed and Charged Each	†Cap. per Cell Amp. Hrs.	Over All Dimensions Inches Lgth.	Wdth.	Ht.	Approx. Wt. Lbs. Packed
BTMH- 2	1 Row	11	$44.80	6	26 5/8	4 15/16	9 7/8	81
CTMH- 2	1 Row	11	65.15	12	29 7/16	7 1/2	11 7/8	156
PTMH- 2	1 Row	11	106.30	24	33 3/8	8	16 5/8	249
ETMH- 2	2 Rows	11	142.90	36	20 9/16	20 1/2	16 3/8	368
BTE- 5	1 Crate	11	65.25	14.4	21 7/8	12	9 7/8	148
BTE- 7	1 Crate	11	75.25	21.6	21 7/8	12	9 7/8	160
KZHG- 7	1 Crate	11	82.25	26.6	21 7/8	12	9 7/8	160
BI- 5	Ironclad	2	13.00	14.4	8 5/8	3 1/8	7 7/8	15
BI- 9	Ironclad	2	19.25	28.8	8 5/8	4 7/8	7 7/8	23
DMGO- 3		1	12.00	20	4 11/16	8 1/16	14 3/8	32
DMGO- 5		1	15.75	40	4 11/16	8 1/16	14 3/8	37
DMGO- 7		1	20.00	60	5 15/16	8 1/16	14 3/8	46
DMGO- 9		1	24.50	80	7	8 1/16	14 3/8	56
EMGO- 5		1	25.50	80	5 11/16	10 3/16	17 1/4	69
EMGO- 7		1	33.00	120	7 1/8	10 3/16	17 1/4	90
EMGO- 9		1	39.75	160	7 1/8	10 3/16	17 1/4	99
FMGO- 9		1	95.25	320	10 11/16	14 7/16	22	231
FMGO-11		1	109.25	400	10 11/16	14 7/16	22	246
FMGO-13		1	125.25	480	12 5/16	14 7/16	22	290
EOGO- 5		1	19.00	80	5 11/16	10 3/16	16 5/16	52
EOGO- 7		1	23.00	120	5 11/16	10 3/16	16 5/16	56
EOGO- 9		1	27.00	160	5 11/16	10 3/16	16 5/16	61
EOGO-11		1	31.75	200	7 1/8	10 3/16	16 5/16	75
EOGO-13		1	35.75	240	7 1/8	10 3/16	16 5/16	80
FOGO-15		1	100.00	532	10 11/16	14 7/16	22	230
FOGO-17		1	109.00	608	10 11/16	14 7/16	22	237
FOGO-19		1	118.00	684	10 11/16	14 7/16	22	245
FOGO-21		1	129.00	760	12 5/16	14 7/16	22	282
FOGO-23		1	138.00	836	12 5/16	14 7/16	22	290

*Prices do not include pilot balls, except on Types BTE, KZHG and BI. One set of these indicators is regularly furnished with these types. Prices of cells of Types DMGO, EMGO, FMGO, EOGO and FOGO include necessary bolt connectors, but do not include intercell connectors.

†At 8-hour rate to 1.75 volts.

Titan Storage Batteries

In Sealed Glass Jars



For use in homes, camps and for farm lighting.

Batteries are shipped charged ready for use.

Specific gravity fully charged 1.245.

Type	Amp. Hr. Cap. Intermittent Rate	16 Cells Ship Wt. Lbs.	16 Cells Each	56 Cells Ship. Wt. Lbs.	56 Cells Each	Normal Charge Rate in Amps.	No. of Plates per Cell	Type of Positive Plate Used
IGS- **25**	25	200	**$76.00**	710	**$266.00**	2.25	3	A
IGS- **50**	50	230	**97.00**	810	**339.50**	4.5	5	A
IGS- **70**	70	530	**115.60**	1855	**404.70**	6.25	5	P-22
IGS-**105**	105	548	**144.70**	1918	**506.30**	9.40	7	P-22
IGS-**125**	125	670	**159.00**	2345	**556.50**	11.25	7	P-30
IGS-**185**	185	860	**203.30**	3010	**711.60**	16.85	7	P-40
IGS-**250**	250	1264	**253.80**	4424	**888.30**	22.50	9	P-40
IGS-**315**	315	1340	**287.50**	4690	**1006.10**	28.10	11	P-40
IGS-**375**	375	1440	**349.70**	5040	**1224.00**	33.75	13	P-40
IGS-**440**	440	1520	**375.30**	5330	**1313.50**	39.35	15	P-40
IGS-**500**	500	1760	**432.80**	6160	**1514.90**	45.00	17	P-40
IGS-**565**	565	1824	**537.70**	6400	**1881.90**	50.6	19	P-40

Jar Dimensions

Type	Length Inches	Width Inches	Height Inches	Type	Length Inches	Width Inches	Height Inches
IGS- **25**	1¾	6½	7⅞	IGS-**250**	5¾	9¾	13½
IGS- **50**	2½	6¾	7⅞	IGS-**315**	5¾	9¾	13½
IGS- **70**	3¼	7⅜	10½	IGS-**375**	6¾	9¼	13⅜
IGS-**105**	3¼	7⅜	10½	IGS-**440**	6¾	9¼	13⅜
IGS-**125**	4	7¾	12½	IGS-**500**	8	9	13⅜
IGS-**185**	3¾	9¼	13½	IGS-**565**	8¾	9¼	13½

Plate Dimensions

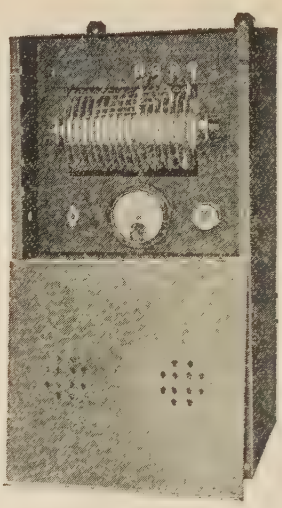
Allow 12 inches above the overall height of jar for height of battery rack to permit inspection with hydrometer.

Type	Width Inches	Height Inches	Thickness Inches
A Positive	5⅝	4½	7/32
P-22 Positive	5 13/16	5⅞	7/32
P-30 Positive	5¾	7⅛	7/32
P-40 Positive	7¾	7¾	7/32

The intermittent rating in amperes is the current the battery will give discharging 4 hours resting 16 hours, discharging 8 hours resting 16 hours, discharging 8 hours resting 16 hours, and discharging 4 hours to 1.7 volts per cell.

This ampere rate multiplied by 24 gives the intermittent ampere hours.

Square D RectiFilters



RectiFilter furnishes d.c. of the required purity from an a.c. circuit; designed to fill a long felt need for a reliable source of d.c. requiring no attention. It is only necessary to connect the a.c. line and the d.c. load to the proper terminals.

Used wherever a source of d.c. is required. Applications include furnishing power for telephone systems, signal systems, including fire alarm systems, sound on film equipment, broadcasting and public address equipment and magnetic chucks.

RectiFilter is an assembly of rectifiers, impedances, transformers and condensers, all designed to insure uninterrupted service. No moving parts or batteries to demand constant attention and maintenance.

RectiFilter must be chosen by characteristics of d.c. required and by maximum drain and duty cycle necessary to serve application. A.c. component (a.c. wave or ripple remaining in the d.c.) is shown for each unit, and while values are considered to be well within requirements for the service indicated, it is well to check against requirements for particular application before deciding upon unit.

After choosing the proper group, pick a unit that will give necessary voltage, considering the regulation required, necessary amperage and duty cycle demanded by the application.

For Telephone Service (Heavy Intermittent Duty)

Cat. No.	Each	*Volts D.C.	Amperes Continuous Drain	Amperes Heavy Intermittent Duty	Amperes Light Intermittent Duty	Maximum Volts Less Than Full Load	A.C. Component in Volts at Continuous Drain Rating	A.C. Ring Volts
PC-**2060**	**$30.00**	6	.350	.350	.500	8	.020	6-12-18
PC-**2120**	**60.00**	12	.500	.500	.750	17	.020	6-12-18
PC-**1242**	**130.00**	24	.750	1.0	2.0	27	.020	None
PC-**2242**	**140.00**	24	.750	1.0	2.0	27	.020	12-18-24
PC-**1244**	**175.00**	24	2.0	4.0	4.0	28	.020	None
PC-**1486**	**330.00**	48	3.0	6.0	8.0	52	.040	None

*At heavy intermittance duty rating for Telephone Units.

For Signal Service

Cat. No.	Each	Volts D.C.	Amperes Continuous Drain	Amperes Heavy Intermittent Duty	Amperes Light Intermittent Duty	Maximum Volts Less Than Full Load	A.C. Component in Volts at Continuous Drain Rating	A.C. Ring Volts
PC-**6061**	***$40.00**	6	1.0	2.0	2.0	9	1.0	None
PC-**6121**	*** 55.00**	12	1.0	2.0	2.0	17	2.0	None
PC-**6241**	**85.00**	24	1.0	2.0	2.0	34	6.0	None
PC-**6242**	***125.00**	24	2.0	3.0	4.0	36	8.0	None

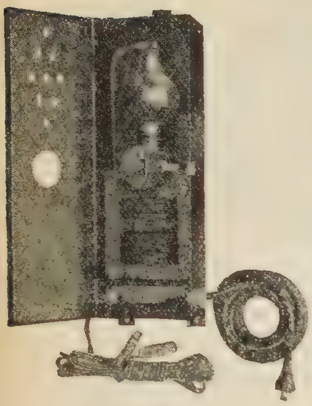
*At continuous drain rating for Signal Units.

Further information upon application.

G-E Tungar Battery Chargers

25 to 60 Cycles, 115 to 230 Volts A.C.

6-Ampere Type



Form B

For charging 6 or 12-volt storage batteries.

Ideal for small garages and filling stations; private car owners also find this battery charger convenient.

The one "on" and "off" switch is the only moving part of this battery charger. Charges one 3-cell battery as quickly as larger capacity outfits charge several. Uses a full 6-ampere rate or can charge two 6-volt batteries connected in series at 3 amperes. Charging rates fixed in accordance with battery load. Will charge a 6-volt battery at 6 amperes, two 6-volt batteries at 3 amperes.

Prices include one Cat. No. 189048 Tungar bulb.

	Dimen., In.			Ship.	Volts: Normal 115 Limits 105/125		Volts: Normal 230 Limits 210/250	
Cy.	Ht.	Width	Depth	Wt. Lbs.	Cat. No.	Each	Cat. No.	Each
60	18¾	5$\frac{11}{16}$	5	24½	3126530	$24.00	3126533	$32.00
40/50	18¾	5$\frac{11}{16}$	5	28½	3126531	28.00	3126534	36.00
25/30	18¾	5$\frac{11}{16}$	5	31	3126532	32.00	3126535	40.00

Cat. No. **189048**, Tungar Bulb, Ship. Wt. 3 Lbs. . .each **$8.00**

6-Battery Type

For charging six 6-volt batteries (or equivalent) at a 6-ampere rate.

Prices include one Cat. No. 189048 Tungar bulb.

					Form A Auto-Transformer		Form B Insulated Transformer	
50/60	19⅜	8¼	9	41	4B1	$48.00	**4B2	$60.00
25/40	19⅜	8¼	9	48	*4B3	56.00	....	.....

*Manufactured on order only.

**Shipping weight, 46 pounds.

Cat. No. **189048**, Tungar Bulb, Ship. Wt. 3 Lbs. . .each **$3.00**

6-12-Battery Type

A medium capacity, one day full wave Tungar will charge six 6-volt batteries at 12 amperes or twelve 6-volt batteries at 6 amperes or equivalent.

Prices include two Cat. No. 189048 Tungar bulbs.

50/60	19⅞	11½	9⅝	63	6B1	$100.00	**6B2	$120.00
25/40	19⅞	11½	9⅝	78	*6B3	116.00	....	......

*Manufactured on order only.

**Shipping weight, 69 pounds.

Cat. No. **189048**, Tungar Bulb, Ship. Wt. 3 Lbs. . .each **$8.00**

12-Battery Type

For charging twelve 6-volt batteries at 6 amperes or equivalent.

Prices include one Cat. No. 189049 Tungar bulb.

					Form A		Form B	
50/60	19⅜	8¼	9	41	4B5	$60.00	**4B6	$80.00
25/40	19⅜	8¼	9	52	4B7	76.00	***5B2	92.00

Shipping weight: **50 pounds; ***62 pounds.

Cat. No. **189049**, Tungar Bulb, Ship. Wt. 3 Lbs. . .each **$8.00**

12-24-Battery Full Wave Type

One day full wave Tungar will charge twenty-four 6-volt batteries at 6 amperes or twelve 6-volt batteries at 12 amperes or the equivalent.

Prices include two Cat. No. 189049 Tungar bulbs.

					Form A		Form B	
50/60	19⅞	11½	11⅝	97	6B5	$136.00	**6B6	$136.00
25/40	19⅞	11½	11⅝	90	7B2	136.00	***7B3	136.00

Shipping weight: **103 pounds; ***120 pounds.

Cat. No. **189049**, Tungar Bulb, Ship. Wt. 3 Lbs. . .each **$8.00**

G-E Full Wave Tungar Battery Chargers

(Noiseless Type) For Telephone Service

Under this classification come outfits designed particularly for use with telephone systems operating on a single battery where it is necessary to charge the battery while it is operating on the telephone circuit.

30-Volt .3—.5-Ampere Outfit

Intended primarily for continuous trickle charging in a small P.B.X. The full wave bulb Cat. No. 199698 is used. A reactance, or choke, of suitable capacity to filter the output is incorporated. An adjustable resistance in the secondary circuit permits adjusting the charging rate from .3 to .5 ampere on 11 or 12 cells of battery.

Full load efficiency 28%. Power factor 78%.

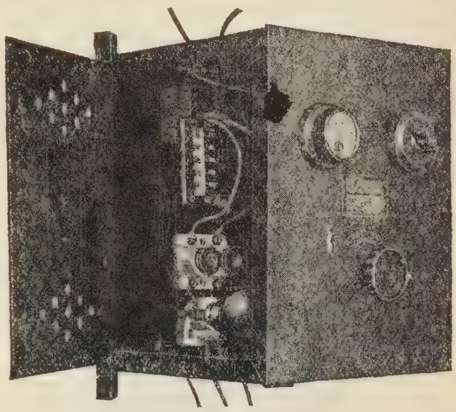
Cat. No.	Each	Volts A.C.	Cy.	Dimensions, In. Ht.	Width	Depth	Approx. Ship. Wt. Lbs.
244708	$50.00	*115	60	9$\frac{11}{16}$	6$\frac{3}{16}$	7$\frac{3}{16}$	20

Available in other voltages and frequencies.

Prices on application.

Cat. No. **199698**, Tungar Bulb. Ship. Wt. ½ Lb. . each **$5.00**

19—52-Volt 1—3-Ampere Full Wave Outfit



Cat. No. 3049455

Designed primarily to meet the requirements of intercommunicating systems and private branch exchanges. Can be used wherever a full wave filtered output up to 3 amperes is required. Two 2-ampere Tungar bulbs are used, the connections being such that the load is divided equally.

Flexibility is a feature of this Tungar. A terminal board conveniently located just inside the left hand door contains 6 sets of secondary taps and permits adjustment for operation on 9 to 24 cells of battery. A rheostat controlled from the panel gives close adjustment of the charging rate over a range of 1 to 3 amperes. A Type DW scale 0–5 ammeter is provided to indicate the rate.

The 19–52-volt rating is nominal, and was selected as 52 volts is the usual floating voltage of a 24-cell battery. This rectifier actually has sufficient capacity to charge at battery voltages up to 65 but the charging current will taper down to 1.75 amperes at 65 volts.

A suitable filter reactance is incorporated in the unit.

Full load efficiency 45%. Power factor 92%.

Cat. No.	Each	Volts A.C.	Cy.	Dimensions, In. Ht.	Width	Depth	Approx. Ship. Wt. Lbs.
3049455	$120.00	*115	60	17½	12⅛	14⅞	78

Available in other voltages and frequencies.

Prices on application.

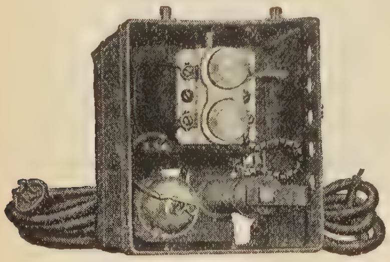
*Will operate between the limits of 105–125.

Cat. No. **12X825**, Tungar Bulb, Ship. Wt. ½ Lb. . each **$4.00**

G-E Low-Voltage Half Wave Tungar Battery Chargers

For Miscellaneous Applications
115 Volts, 60 Cycles

No. 204170—24-30-Volt .5-2.5-Ampere Outfit



Interior View

A simple, compact outfit designed to charge from 9 to 12 cells of lead battery. Two secondary taps on the transformer permit adjusting the rectifier for its maximum output of 2.5 amperes at either 24 or 30 volts. An adjustable resistance of approximately 6 ohms is incorporated in this outfit which permits adjusting the charging rate from a maximum of 2.5 down to a minimum of about .5 ampere. A 2-ampere bulb is used.

Full load efficiency 55%. Power factor 50%.

Will operate between the limits of 105-125 volts.

Height, 9 11/16 inches; width, 6 3/16 inches; depth, 7 3/16 inches.

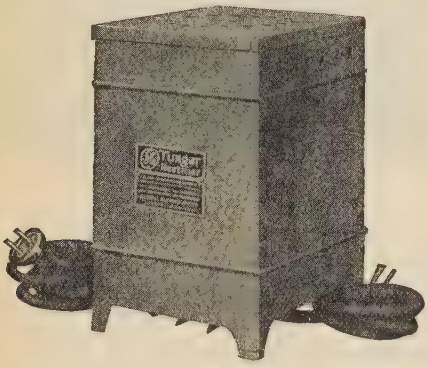
Approximate shipping weight, 25 pounds.

Cat. No. **204170**................................each **$39.00**

Available in other voltages and frequencies. Prices on application.

Cat. No. **195528**, Tungar Bulb, Ship. Wt. ½ Lb...each **$4.00**

No. 199717—40-60-Volt .5-2.5-Ampere Outfit



Similar in general construction to the outfit described above, but has a wider range of d.c. voltage.

There are 3 taps on the transformer secondary which adjust the output to 2.5 amperes at 40, 50 and 60 volts respectively. In addition an adjustable resistance is provided which will regulate the charging rate from 2.5 down to .5 amperes on any one of the taps.

Transformer is so designed that it has considerable inherent reactance regulation, giving rectifier a fairly flat characteristic even when none of the resistance is used. For example, when connected to the 60-volt tap the battery voltage can be increased from 60 to 75 volts and rectifier will continue to charge, the only difference being that charging rate will taper from 2.5 to 1.5 amperes.

A 6-ampere bulb is used providing ample capacity and long life.

Full load efficiency 60%. Power factor 50%.

Will operate between the limits of 105–125 volts.

Height, 9 11/16 inches; width, 6 3/16 inches; depth, 8¾ inches.

Approximate shipping weight, 29 pounds.

Cat. No. **199717**................................each **$55.00**

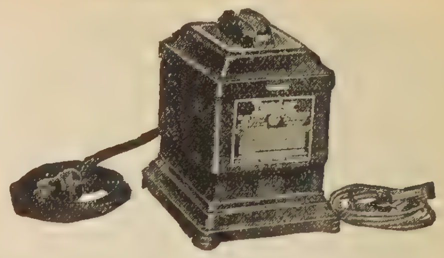
Available in other voltages and frequencies. Prices on application.

Cat. No. **189048**, Tungar Bulb, Ship. Wt. 1 Lb...each **$8.00**

G-E 2-Ampere Tungar Battery Chargers

For Charging All Radio A and B and Auto Storage Batteries

Form B—25 to 133 Cycles—115 to 230 Volts A.C.



Designed to take care of all radio and auto battery charging requirements at home. The combination trickle charge and full rate feature is desirable for radio battery charging. No auxiliary devices or attachments are required other than an ordinary Mazda lamp which is essential to provide correct charging rate for radio B batteries only. Lamp may be inserted in external socket contained in terminal board which is mounted on back of casing.

Will trickle charge a 6-volt radio A battery or charge at full rate of 2 amperes.

For permanent connections to A and B batteries; charging may be controlled by merely throwing a switch.

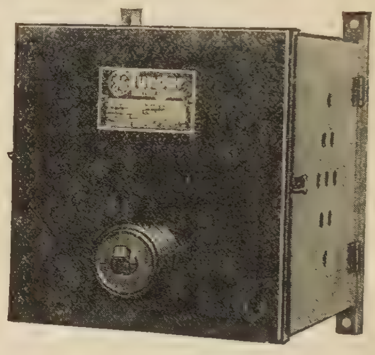
Prices include one bulb, Cat. No. 277465.

Will charge 6-volt battery at 2 amperes or trickle rate of ¾ ampere; 12-volt battery at 1 ampere; 2 or 4-volt battery at 1 ampere; 24 to 96-volt B battery at 1/10 to ¼ ampere.

	Dimensions, Inches				Volts: Normal 115 Limits 105/125		Volts: Normal 230 Limits 210/250	
Cycles	Ht.	Width	Depth	Ship. Wt. Lbs.	Cat. No.	Each	Cat. No.	Each
60	7½	5½	7¼	11½	**277153**	**$14.00**	**279173**	**$20.00**
40/50	8	5½	7¼	14	**279171**	**16.00**	**279174**	**22.00**
25/30	9	5½	7¼	17	**279172**	**18.00**	**279175**	**24.00**

Cat. No. **277465**, Tungar Bulb, Ship. Wt. ½ Lb..each **$4.00**

G-E Tungar Constant Potential Rectifiers



A full-wave, highly efficient rectifier with high power factor and good regulation. Furnished in strong, neat appearing steel casing.

Applications—magnetic chucks, electromagnets, small solenoids, small d.c. motors and many others.

For use wherever 2 amperes or less, 115 or 220 volts d.c. is required and only a.c. is available.

Two hinged doors provide easy accessibility to bulb and transformer. All joints in casing are welded, including door hinges and latches. Angle irons welded to rear of casing add ruggedness and provide a means for wall mounting.

A tumbler switch breaks both sides of a.c. line.

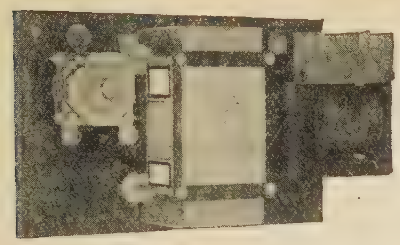
Equipped with a new type mercury barium Tungar bulb. This is a full-wave bulb rated 2 amperes at 250 volts.

Cat. No.	Each	A.C. Volts	Cycles	D.C. Volts	D.C. Amps.	Ship. Wt.Lbs.
3049554	**$60.00**	115	60	115	2	..
3126450	**60.00**	230	60	115	2	..
3049555	**90.00**	115	60	230	2	..
3126451	**90.00**	230	60	230	2	..

Cat. No. **16X897**, Mercury Tungar Bulb, shipping weight, 3 pounds..each **$8.00**

G-E Copper Oxide Rectifiers

For Telephone Service



Designed to deliver a noiseless d.c. of 6 volts, 0.350 amperes. There is a multitude of applications that come within this rating. A few of them are as follows:

New apartment house interphone systems; replace batteries (dry cell or storage batteries) on existing apartment house interphone systems; school interphone systems that come within rated output of this outfit; to supply power for way station telephones on railroad telephone lines; to supply power for local sounders on railroad telegraph lines—the smooth, humless d.c. obtained from this outfit (oscillograph shows no ripple) is praised by Morse code operators—any general application where d.c. not in excess of the rated output is desired.

This rectifier consists of a copper oxide rectifying unit, transformer and necessary specially constructed filter (condenser and choke coil) all mounted on a steel base plate and enclosed in a rugged casing. Casing has an attractive crystallized green finish, which will not chip or mar.

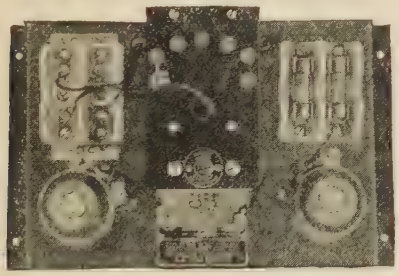
Rating: 115 volts a.c.; 60 cycles; 6 volts d.c., .350 ampere d.c.

Approximate shipping weight, 25 pounds.

Cat. No. **6RC61D2**..........................each **$30.00**

G-E No. 6RC42D7 Copper Oxide Battery Chargers for Fire Alarm Systems

30, 45 or 60 Volts, .150 Amperes



Every municipality with a fire alarm system is a potential customer for a quantity of these battery chargers.

Cycle charging, the method most commonly used at present to supply power to the fire alarm system, requires a "standby" battery for each circuit, and has resulted in overcharging the batteries with a consequent short battery life. Briefly, cycle charging consists of an "A" and "B" battery for each circuit. The "A" battery is charged while the "B" battery is on circuit. The "A" and "B" batteries are interchanged daily.

Trickle charging the battery with a properly designed dependable rectifier eliminates the necessity of the "standby" battery and inherent troubles of charging.

The usual trickle charge will be approximately 100 mils. Model No. 6RC42D7 charger has a capacity of 150 mils, which is sufficient capacity to take care of even unusual conditions. One outfit will be required for each circuit.

A dry type charger; no moving parts, nothing to wear out. Minimum mounting space is required; can be mounted in any convenient out-of-the-way location. Fuse protection in both a.c. and d.c. circuits.

Approximate shipping weight, 50 pounds.

Also furnished for vertical mounting with or without casing.

Model No. **6RC42D7**..........................each **$32.00**

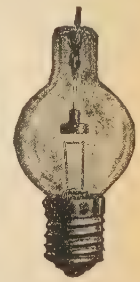
G-E Tungar Bulbs

Standard Tungar Bulbs for Bulb Type Battery Chargers

Cat. No. 195528

Cat. No. 289881 Trickle Bulb

Cat. No. 277465



Cat. Nos. 189048 and 189049

Cat. No. **195528**.—For renewal purposes in the old design 2-ampere Tungars. Also adapted for other chargers which are not equipped to use the Cat. No. 277465 bulb which has the three points of contact in the base. A wire adapter permits making connection to plate (anode) at tip of the bulb.

Cat. No. **289881**.—Used in standard Tungar Trickle Chargers and also in special trickle-charge Tungar units supplied to battery manufacturers for their combination. A battery and charger power units.

Cat. No. **277465**.—All three contacts are made through base. This bulb has capacity for charging a 6-volt A storage battery at 2 amperes and a 120-volt B storage battery at not over .25 ampere.

Cat. No. **189048**.—Should not be used where voltage requirements are over 45 volts except when charging B storage batteries at not over .25 ampere.

Cat. No. **189049**.—Used with larger Tungars having a charging capacity of 100 volts at not over 6 amperes.

Cat. No.	Each	Maximum Rating Amperes	Maximum Rating Volts	Dimen., In. Length Tip to Base	Dimen., In. Diameter Tube	Approx. Ship. Wt. Lbs.
195528	**$4.00**	2/0.25	7.5/ 60	4½	2¼	½
277465	**4.00**	2/0.25	7.5/120	4	2¼	½
189048	**8.00**	6	7.5/ 45	6½	3	3
189049	**8.00**	6	100	6½	3	3
289881	**4.00**	5	7.5	4⅛	1⅜	½

Special Tungar Bulbs

Cat. No. 217283

Cat. No. **217283**.—Used for certain special applications such as rectifiers for motion picture projectors. This bulb is not interchangeable with 6-ampere bulbs used in standard Tungars.

Cat. No. **199698**.—A full-wave Tungar bulb used in a Tungar for charging batteries in telephone supply installations and also in certain types of radio power devices. This bulb delivers an output up to 3 amperes, depending on the nature of the load.

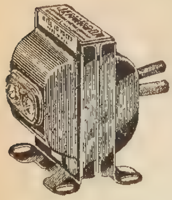
Cat. No. 199698 Full-Wave Bulb

Cat. No. **12X825**.—Similar in construction to the standard Cat. No. 277465 except that it is designed to meet higher voltage requirements. Used in certain special Tungars for charging high-voltage batteries.

Cat. No. **206501**.—A high-voltage bulb. Equipped with wire adapter so that it can be used in old style Tungars.

Cat. No.	Each	Maximum Rating Amperes	Maximum Rating Volts	Dimen., In. Length Tip to Base	Dimen., In. Diameter Globe	Approx. Ship. Wt. Lbs.
12X825	**$4.00**	2	75	4	2¼	½
199698	**5.00**	.5	30	5½	2	½
206501	**4.00**	2	75	4½	2¼	½
217283	**15.00**	15	60	9½	3¾	3

Jefferson Wizard Bell Ringing Transformers



For residences or small flat buildings. Will operate door bells, buzzers, annunciators, and door openers. For 100-120 volts; 5 watts. Secondary, 10 volts.
Size, 2⅜x2⅜x2⅜ in. Weight, 1 lb.

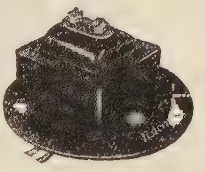
No. **230–101**, 50–133 Cycles.....each **$1.25**
No. **230–102**, 25–40 Cycles.....each **1.50**

Jefferson Nucode Bell Ringing Transformers

With Round or Square Cover

Mounted on an outlet box cover. Round cover fits 3¼ and 4-inch octagon boxes; square cover fits 3¼ and 4-inch octagon and 4-inch square boxes.

Knockout in cover permits hanging a drop cord from same outlet box. Transformer wires do not interfere with lighting wires. Grounded to prevent shocks or possibility of fires.



No. 230-111

Depth, 2¼ inches; width, 2⅜ inches; height, 2¼ inches.

Cat. No.	Each	Style Cover	Capacity Watts	Primary Volts	Primary Cycles	Secondary Voltages	Wt. Lbs.
230-111	**$1.50**	Round	5	100-120	50-133	10	1⅛
230-112	**2.00**	Round	5	100-120	25- 40	10	1⅛
230-141	**1.50**	Square	5	100-120	50-133	10	1⅛
230-142	**2.00**	Square	5	100-120	25- 40	10	1⅛

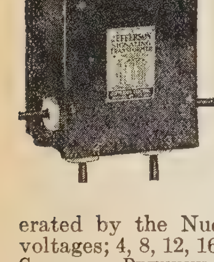
Jefferson Tri-Volt Bell Ringing Transformers

For 100 to 120 volts a. c. Generates 3 secondary voltages: 6, 12 and 18 and will take care of longer leads than Wizard or Nucode.

Capacity, 5 watts; dimensions 2x2½x3¾ inches. Weight 1 pound.

No. **230-121**, for 60 Cycles.........each **$1.50**
No. **230-122**, for 25 Cycles.........each **2.00**

Jefferson Heavy Duty Signalling Transformers



When the current demand is greater than the capacity permitted with the small transformers, the heavy duty types should be used. Examples of such uses are large apartment buildings, hotels, factories, schools, etc.

The core and windings are hermetically sealed in a heavy metal case.

Standard winding will operate on 100 to 120 volts a.c., 50 to 133 cycles.

50 Watts

This transformer is designed for heavier signal work and installations that require more power than is generated by the Nucode or Tri-volt Type. Six secondary voltages; 4, 8, 12, 16, 20 and 24. Weighs 6 pounds.

Cap. Watts	Dimensions, Inches Length	Width	Height	60 Cycles No.	Each	25 Cycles No.	Each
50	4 1/16	3⅝	3 1/16	**231–101**	**$5.00**	**231–102**	**$9.00**

100 Watts

Heavy duty transformer designed to take care of large installations and operate a greater number of bells and other signal devices than the smaller type transformers. Six secondary voltages; 4, 8, 12, 16, 20 and 24. Weighs 9 pounds.

100	5 1/16	4 1/16	3⅝	**231–111**	**$5.50**	**231–112**	**$11.00**

250 Watts

Designed for unusually large installations. Secondary voltages; 4, 8, 12, 16, 20 and 24. Supplied with any desired secondary voltages at additional cost. Weighs 15 pounds.

250	5 5/16	5 1/16	4¾	**231–141**	**$8.25**	**231–142**	**$16.50**

500 Watts

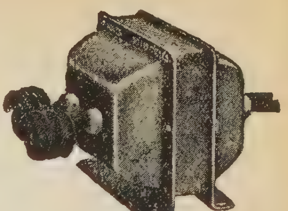
Has an output of 500 watts, secondary voltages; 4, 8, 12, 16, 20 and 24. Furnished with any desired secondary voltages at additional cost.

500	7⅜	6⅜	5½	**231–151**	**$14.50**	**231–152**	**$29.00**

For 220-V. 50 to 133-cycle transformers, add 15 per cent.

Twenty-five cycles dimensions slightly larger; prices on application.

Jefferson Low Voltage Transformers



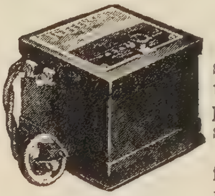
Designed for service wherever low voltage a.c. current is necessary, such as the operation of electrically controlled valves, thermostats, magnetic relays, etc.

Approved by the Underwriters' Laboratories.

No.	Each	Primary Volts	Primary Cycles	Secondary Watts	Secondary Volts	Wt. Lbs.
630–101	**$2.50**	100–120	50–133	20	8	1½
637–101	**3.00**	100–120	50–133	35	8–16–24	2¾
637–111	**3.50**	100–120	50–133	50	8–16–24	2¾
637–121	**3.75**	100–120	50–133	75	8–16–24	3¼
637–131	**4.50**	100–120	50–133	100	8–16–24	4¼
637–201	**3.00**	100–120	50–133	35	24	2¾
637–211	**3.35**	100–120	50–133	50	24	2¾
637–221	**3.50**	100–120	50–133	75	24	3¼
637–231	**4.50**	100–120	50–133	100	24	4¼

Jefferson Universal Toy Transformers

100-120 Volts; 50-133 Cycles A.C.



No. 535-161

Equipped with an extension cord, separable attachment plug and a slide type voltage control, making it possible to transmit the power in small and uniform steps.

All models except No. 3 can be furnished in 25–40 cycles. Prices upon application.

Little Jeff

Recommended for operating all narrow gauge American Flyer, Dorfan, Ives and Lionel outfits and Gilbert Toy motors. Delivers 6 secondary voltages ranging from 5½ to 11½ volts in 1.2-volt steps.

Cat. No. **535-161**, 50 Watts, Weight 3½ Lbs.....each **$3.25**

Midget

Operates Ives trains, all narrow and small sized wide gauge outfits; American Flyer, all narrow and wide gauge trains Nos. 1471, 1472, 1463 and 1464; Lionel trains, all O gauge and small sized standard gauge. Also operates the Kokomo electricar. Delivers 18 secondary voltages ranging from 5½ to 22½ volts in 1-volt steps, with additional permanent voltages of 6 and 12 volts.

Cat. No. **535-171**, 75 Watts, Weight 5 Lbs.......each **$5.00**

Model 2

Operates all American Flyer, Ives, Lionel and other wide gauge trains. Also Christmas lighting outfits up to sixteen 14-volt lamps. Delivers 24 secondary voltages ranging from 5½ to 23 volts in ¾-volt steps. Additional permanent voltages of 4¼, 9 and 13½ volts.

Cat. No. **535-181**, 100 Watts, Weight 6½ lbs.....each **$6.50**

Model 3

Operates all types of trains. For use with window or counter display and Christmas tree lighting outfits up to thirty-two 14-volt lamps. Delivers 30 secondary voltages ranging from 1 to 30 volts in 1-volt steps. Additional permanent voltages of 6, 12, 18 and 24 volts.

Cat. No. **535-191**, 150 Watts, Weight 11¾ Lbs...each **$9.00**

Edwards Signaling Transformers

Primary 110 Volts, 25-40 or 60 Cycles
Secondary 4-8-12-16-20-24 Volts

Schedule T

These transformers adequately cover the signaling device field with a greater range of capacities.

Cat. No.	Each	Cycle	Watts	Wt. Lbs.
88	**$5.15**	60	50	3
88	**10.30**	25–40	50	3
90	**6.18**	60	100	7
90	**12.36**	25–40	100	7
94	**9.24**	60	250	12
94	**18.50**	25–40	250	12
99	**16.50**	60	500	15
99	**33.00**	25–40	500	15

No. 86 Edwards Steel Case Bell Ringing Transformers

Primary 110 Volts, 25–40 or 60 Cycles

Schedule E

Correctly designed for the proper operation of all signaling devices.

Cycles	Watts	Std. Pkg.	Wt. Lbs.	Price Each
60	25	50	54	**$1.16**
25–40	25	50	54	**2.32**

For 220-volt primary add 15 per cent to price.

No. 86ER Edwards Bell Ringing Transformers

Fits on 3 1/4 and 4-Inch Octagon and Square Boxes

Primary 110 Volts, 25-40 or 60 Cycles

Schedule E

Correctly designed for the proper operation of all signaling devices.

This transformer is of the exact wattage, voltage and other characteristics necessary to eliminate guess work on the part of the contractor or jobber.

For 220-volt primary add 15 per cent to price.

Cycles	Watts	Standard Package	Weight Pounds	Price Each
60	25	50	65	**$1.16**
25–40	25	50	65	**2.32**

No. 86ES Edwards Bell Ringing Transformers

Fits On 3 1/4 or 4-Inch Octagon and Square Boxes

Primary 110 Volts, 25–40 or 60 Cycles

Schedule E

Correctly designed for the proper operation of all signaling devices.

Cycles	Watts	Std. Pkg.	Wt. Lbs.	Price Each
60	25	50	80	**$1.16**
25–40	25	50	80	**2.32**

For 220-volt primary add 15 per cent to price.

No. 86T Edwards Steel Case Bell Ringing Transformers

Primary 6–8–14 Volts, 60 Cycles or 110 Volts, 25–40 Cycles

Schedule E

These transformers are of the exact wattage, voltage and other characteristics necessary to eliminate guesswork on the part of the contractor and jobber.

Cycles	Watts	Std. Pkg.	Wt. Lbs.	Price Each
60	25	50	56	**$1.55**
25–40	25	50	56	**3.10**

For 220-volt primary add 15 per cent to price.

Jefferson Luminous Tube Sign Transformers

Standard Types

Nos. 721-111, 721-121, 721-411

Designed for use in all types of portable or fixed, indoor or outdoor neon signs. The complete assortment of models provides a transformer to meet the most exacting requirements, both as to electrical and mechanical details.

Mid-point grounded, balanced design patented construction and many other improvements insure perfect secondary current regulation regardless to length of tubing operated; high efficiency permitting long tube lengths; cool operation; quietness; long life; neat appearance and lightness in weight.

The case in which transformer is assembled is made of extra heavy rust-resisting steel, flanged construction and with substantial brackets, insuring rugged construction. Binding posts and nuts are cadmium plated to guard against corrosion, while the case is black enameled, baked thoroughly to present a tough and durable finish.

110 Volts, 60 Cycles

Binding Posts Standard (One at Each End of Case)

Cat. No.	Each	Cap. V.A.	Secondary Volts	Secondary M.A.	Overall Dimen., In. Length	Overall Dimen., In. Width	Overall Dimen., In. Height	Approx. Wt., Lbs.
721-111	**$15.00**	450	15000	30	14 1/4	5 3/8	6	31
721-121	**13.00**	350	12000	30	14 1/4	4 11/16	6	27
721-131	**9.50**	180	6000	30	12	3	4 3/4	15
721-141	**12.00**	250	9000	30	11 9/16	4 3/16	5 41/64	21
721-151	**10.50**	225	7500	30	11 9/16	4 3/16	5 41/64	21
721-161	**8.00**	150	5000	30	9 3/16	4	4 27/32	14
721-221	**12.00**	250	12000	24	11 9/16	4 3/16	5 41/64	21
721-411	**22.00**	900	15000	60	14 11/16	5 11/16	7 1/4	47
721-421	**19.00**	720	12000	60	14 1/4	5 7/8	6	39
721-441	**16.50**	540	9000	60	14 1/4	5 3/8	6	33

Leads Standard—Narrow Case

Cat. No.	Each	Cap. V.A.	Secondary Volts	Secondary M.A.	Length	Width	Height	Approx. Wt., Lbs.
721-171	**$7.00**	100	3500	30	6 1/16	3 1/8	4 1/2	9
721-191	**6.50**	90	3000	30	8 1/4	3 1/8	4 3/4	9
721-331	**8.00**	150	6000	18	12	2 3/4	4 3/4	12
721-341	**10.50**	190	9000	18	12	3	4 3/4	15
721-351	**9.00**	150	7500	18	9 9/16	2 11/16	3 17/32	13
721-361	**6.50**	100	5000	18	6 1/16	3 1/8	4 1/2	9 1/2
721-371	**6.25**	75	3000	18	6 1/16	2 11/16	4 1/2	9 1/4
721-391	**6.00**	80	3000	18	8 1/4	3 1/8	4 3/4	8 1/2

Binding Posts Standard (Both at One End of Case)

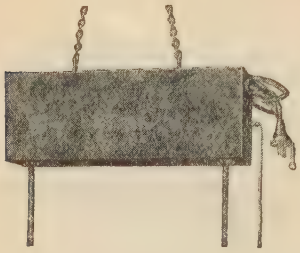
Cat. No.	Each	Cap. V.A.	Secondary Volts	Secondary M.A.	Length	Width	Height	Approx. Wt., Lbs.
721-111X	**$15.00**	450	15000	30	12 1/2	5 9/16	6	31
721-121X	**13.00**	350	12000	30	12 1/2	5 9/16	6	29
721-141X	**12.00**	250	9000	30	11	4 1/8	5 3/4	22
721-221X	**12.00**	250	12000	24	11	4 1/8	5 3/4	22

High Power Factor Type

Particularly desirable in d.c. districts where it is necessary to use converters.

Cat. No.	Each	Cap. V.A.	Secondary Volts	Secondary M.A.	Length	Width	Height	Approx. Wt., Lbs.
724-111	**$21.00**	250	15000	30	14 1/4	5 3/8	8	37
724-121	**20.00**	200	12000	30	14 1/4	5 3/8	8	35
724-141	**17.00**	150	9000	30	11 9/16	4 3/16	7 3/8	26
724-151	**15.00**	120	7500	30	11 9/16	4 3/16	7 3/8	25
724-161	**12.50**	90	5000	30	9 1/8	4	6 7/16	16
724-221	**17.00**	150	12000	24	11 9/16	4 3/16	7 3/8	26

Jefferson Luminous Tube Sign Transformers



Type 726 with Secondary Leads

Cabinet Type

Equipped with primary pull switch and 7-foot primary cord with standard 2-prong plug and approved connector means for grounding. Where conduit or armored cable installation is required, entry may be made by removing the cord and bushing; if entry at top is more practical, a knockout is provided. A plate in the end of the case is removable for making connections from the supply circuit to transformer leads.

For conduit or armored cable installations these transformers may be obtained without the primary cord and plug, at a reduction of $1.00. Likewise, the primary pull switch may be omitted and the price is reduced $1.00.

Cable on Secondary

Cat. No.	Each	Cap. V.A.	Secondary Volts	Secondary M.A.	Overall Dimen., In. Length	Width	Height	Approx. Wt., Lbs.
726-111	**$19.50**	450	15000	30	15 5/16	5	7 1/2	41
726-121	**18.00**	350	12000	30	15 5/16	5	7 1/2	40
726-141	**16.50**	250	9000	30	15 5/16	4 1/8	7 1/2	34
726-161	**13.00**	150	5000	30	10 3/8	3 1/2	5 1/2	15
726-221	**16.50**	250	12000	24	15 5/16	4 1/8	7 1/2	33
726-351	**14.50**	150	7500	18	15 5/16	2 3/4	7 1/2	24
726-361	**12.50**	100	5000	18	10 3/8	2 3/4	5 1/2	12
			Leads Standard					
726-131	**$14.50**	180	6000	30	15 5/16	3	7 1/2	25
726-151	**15.00**	225	7500	30	15 5/16	4 1/8	7 1/2	32
726-331	**13.00**	150	6000	18	15 5/16	3	7 1/2	24
726-341	**15.00**	190	9000	18	15 5/16	3	7 1/2	25
			Electrode Housing Standard					
727-111	**$19.00**	450	15000	30	15 5/16	5	7 1/2	41
727-121	**17.50**	360	12000	30	15 5/16	5	7 1/2	40
727-131	**14.00**	180	6000	30	15 5/16	3	7 1/2	25
727-141	**16.00**	270	9000	30	15 5/16	4 1/8	7 1/2	34
727-151	**14.50**	225	7500	30	15 5/16	4 1/8	7 1/2	32
727-161	**12.50**	150	5000	30	10 3/8	3 1/2	5 1/2	15
727-221	**16.00**	290	12000	24	15 5/16	4 1/8	7 1/2	33
727-331	**12.50**	150	6000	18	15 5/16	3	7 1/2	24
727-341	**14.50**	190	9000	18	15 5/16	3	7 1/2	25
727-351	**14.00**	160	7500	18	15 5/16	2 3/4	7 1/2	24
727-361	**12.00**	130	5000	18	10 3/8	2 3/4	5 1/2	12

All of the above transformers have 110-volt, 60-cycle primaries. Prices for other voltages and frequencies on application.

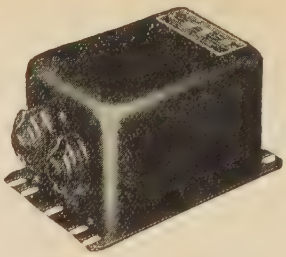
Core and Coil

Particularly adaptable for small portable signs, where space is at a premium and where small sections of tube are to be operated.

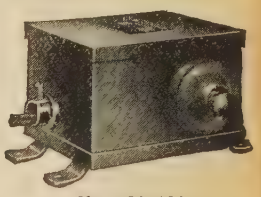
Cat. No.	Each	Cap. V.A.	Secondary Volts	Secondary M.A.	Overall Dimen., In. Length	Width	Height	Approx. Wt., Lbs.
720-361	**$4.00**	100	5000	18	3 3/4	2 5/8	4 1/2	5 1/4
720-371	**3.75**	80	4000	18	3 3/4	2 5/8	4 1/8	5
720-381	**3.00**	50	2000	18	3 3/4	2 3/8	4	3 1/2
720-391	**3.50**	60	3000	18	3 3/4	2 5/8	4 1/8	4 1/4

All of the above transformers have 110-volt, 60-cycle primaries. Prices for other voltages and frequencies on application.

Jefferson Oil Burner Ignition Transformers



Nos. 638-171, 638-251, 638-261 and 638-271



No. 638-281

The introduction of various types of burners has required the development of different types of transformers. This is a transformer for every specific application—5000, 10000, 12000 and 15000-volt ratings; for intermittent and continuous service; grounded, mid-point grounded, balanced mid-point grounded, and insulated secondaries; and in core and shell type designs.

The cool operation is accomplished by exacting requirements, liberal design throughout, plus the use of quality materials of adequate size which results in long transformer life.

Equipped with built-in condensers of proper size and design to eliminate the possibility of objectionable radio interference.

Nos. 638-251, 638-261, 638-271 and 638-171 are assembled in the new stream lined case. This case is of heavy drawn steel of exceptional durability, treated to resist rust and finished in a high lustre long-wearing black enamel. All other types are assembled in similarly rugged and attractive cases of standard design. Universal mounting brackets of sturdy design are provided.

A junction box of liberal proportions is built into the top of the case. Knockouts are provided in two sides and in the end of the case for convenient entrance. Quick and easy splicing results and there is ample space for additional wiring which any installation may require. Primary leads 24 inches long are standard on all types.

110 Volts; 60 Cycles Primary

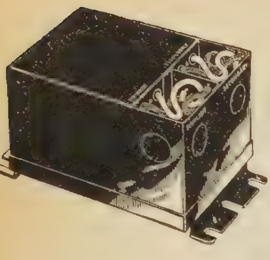
Cat. No.	Each	Cap. V.A.	Secondary Volts	Secondary Output M.A.	Type of Core	Max. Gap Setting Inches	No. of Sec.	Approx. Wt. Lbs.
			Grounded					
***638-281**	**$10.25**	125	5000	18	Shell	1/16	1	9
			Insulated					
***638-191**	**$10.25**	125	5000	18	Shell	1/16	2	9
			Grounded					
638-171	**$12.50**	250	10000	23	Core	3/16	1	14
			Mid-Point Grounded					
638-251	**$12.50**	250	10000	23	Core	3/16	2	14
			Insulated					
638-261	**$13.25**	250	10000	23	Core	3/16	2	14
			Mid-Point Grounded					
638-271	**$14.00**	250	12000	20	Core	1/4	2	14
			Mid-Point Grounded (2)					
638-291	**$15.50**	450	15000	30	Shell	1/8	2	22

*Not equipped with radio filter.

The above transformers are designed for operation on 110 volt 60 cycle a.c. They are obtainable in other voltages and frequencies at extra cost. Prices on application.

Jefferson Double Wound (Insulating) Transformers

50-60 Cycles



This type of air cooled transformer has been very commonly used in railway service for lighting and signaling purposes. In addition it is required for signaling systems of schools, factories, mines, etc., for remote control switching, for lighting purposes, to operate low-voltage equipment from power lines, for insulating circuits from power and lighting supply lines, for emergency lighting systems, etc.

Illustration shows the standard type of double wound transformer which is equipped with wiring compartment for housing primary and secondary splices. Knock-outs are provided for making connections with rigid or flexible steel conduit or for inserting porcelain bushings where open wiring is employed.

The standard line does not comply with the A.R.A. standard, but does comply with the A.I.E.E. specifications. Transformers complying with the A.R.A. specifications can be furnished on special order.

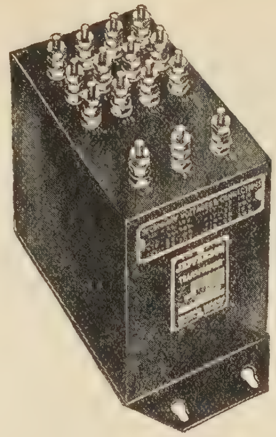
Cat. No.	*Each	Cap. V.A.	Approx. Dimen., In. Depth	Width	Length	Approx. Wt. Lbs.
220-230-240 Primary Volts; 110-115-120 Secondary Volts						
235–101	**$10.50**	50	3 3/4	4 1/16	6 11/16	5 1/2
235–111	**11.25**	75	3 3/4	4 1/16	6 11/16	7
235–121	**12.00**	100	3 3/4	4 1/16	6 11/16	9
235–131	**13.50**	150	4 7/8	4 7/8	7 5/8	11
235–141	**16.25**	250	4 7/8	4 7/8	7 5/8	19
235–151	**22.50**	500	5 1/2	6 3/8	11 3/8	27
235–161	**28.00**	750	6 1/4	6 3/8	11 3/8	32
220-240 Primary Volts; 115-230 Secondary Volts						
235–201	**$34.50**	1000	6 5/16	7 1/16	13 3/8	38
235–211	**43.00**	1500	7 9/16	8 5/16	14 1/4	50
235–221	**50.75**	2000	8 9/16	8 5/16	14 1/4	65
235–231	**64.25**	3000	9 9/16	10 7/16	14 1/4	85
235–241	**93.50**	5000	9 9/16	10 7/16	16	130
235–251	**130.00**	7500	9 9/16	10 7/16	19	175
235–261	**167.00**	10000	9 9/16	10 7/16	23	265
440 Primary Volts; 110 Secondary Volts						
235–501	**$11.25**	50	3 3/4	4 1/16	6 11/16	5 1/2
235–511	**12.00**	75	3 3/4	4 1/16	6 11/16	7
235–521	**13.50**	100	3 3/4	4 1/16	6 11/16	9
235–531	**14.75**	150	4 7/8	4 7/8	7 5/8	11
235–541	**17.50**	250	4 7/8	4 7/8	7 5/8	19
235–551	**24.50**	500	5 1/2	6 3/8	11 3/8	27
235–561	**30.25**	750	6 1/4	6 3/8	11 3/8	32
550-440 Primary Volts; 110-220 Secondary Volts						
235–301	**$12.25**	50	3 3/4	4 1/16	6 11/16	5 1/2
235–311	**13.00**	75	3 3/4	4 1/16	6 11/16	7
235–321	**14.75**	100	3 3/4	4 1/16	6 11/16	9
235–331	**16.00**	150	4 7/8	4 7/8	7 5/8	11
235–341	**19.25**	250	4 7/8	4 7/8	7 5/8	19
235–351	**27.00**	500	5 1/2	6 3/8	11 3/8	27
235–361	**33.00**	750	6 1/4	6 3/8	11 3/8	32
440-220 Primary Volts; 220-110 Secondary Volts						
235–401	**$38.50**	1000	6 5/16	7 1/16	11 3/8	38
235–411	**45.50**	1500	7 9/16	8 5/16	14 1/4	50
235–421	**54.00**	2000	8 9/16	8 5/16	14 1/4	65
235–431	**69.50**	3000	9 9/16	10 7/16	14 1/4	85
235–441	**101.50**	5000	9 9/16	10 7/16	16	130
235–451	**142.25**	7500	9 9/16	10 7/16	19	175
235–461	**182.00**	10000	9 9/16	10 7/16	23	265
550-600 Primary Volts; 220-110 Secondary Volts						
235–601	**$39.25**	1000	6 5/16	7 1/16	11 3/8	38
235–611	**47.00**	1500	7 9/16	8 5/16	14 1/4	50
235–621	**55.50**	2000	8 9/16	8 5/16	14 1/4	65
235–631	**71.00**	3000	9 9/16	10 7/16	14 1/4	85
235–641	**103.00**	5000	9 9/16	10 7/16	16	130
235–651	**144.25**	7500	9 9/16	10 7/16	19	175
235–661	**184.25**	10000	9 9/16	10 7/16	23	265

*For 25 cycle, add 50%.

Jefferson Railway Transformers

Indoor Type

For Signal, Lighting and Rectifier Service



Designed to conform to the testing and constructional specifications of the American Railway Association. Intended for use in the operation of electrical equipment incidental to railway signal systems such as signal lights, battery rectifiers, relays and associated requirements.

This is an air cooled unit designed for wall or shelf mounting.

Windings developing or carrying 115 volts or less are brought out to standard A.R.A. terminals mounted on an attractive bakelite panel. Windings carrying in excess of 115 volts are brought out of the housing in the form of flexible leads which are terminated in connecting lugs.

Generally, compensating taps are supplied on the primaries, although for some services, special auto transformer taps are furnished. When compensating taps are furnished, they are full of capacity rating.

Primary windings of 115 volts or less and all secondary windings are insulated to withstand a dielectric strength test of 3000 volts. Primary windings in excess of 115 volts are designed to withstand a dielectric strength test of 10000 volts.

Name plates and winding diagrams are furnished with each transformer which give the complete information required by the A.R.A. standards.

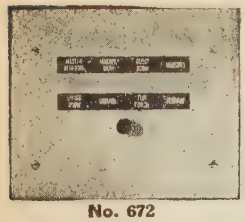
The following table outlines a number of the more popular types of transformers furnished for these services. These transformers fulfill practically all signalling system requirements, although in many cases transformers of special specifications are supplied.

50-100 Cycles; 115-100 Primary Volts

Cat. No.	*Each	Cap. V.A.	No. of Sec.	Secondary Voltages and Tap Positions	Cap Amps.	Approx. Dimen., In. Ht.	Wall Space	Approx. Wt. Lbs.
Lighting Type								
236–101	**$8.00**	50	1	16(12-1-3)	3.0	5 1/2	5 x5	12
236–111	**12.25**	100	1	16(12-1-3)	6.0	7 3/4	9 1/4x3 3/4	20
236–121	**16.50**	160	2	15(6-6-1-1-1)	5.3	7 3/4	9 1/4x4 3/4	25
236–131	**15.75**	200	1	15(5-7-3)	14.0	7 3/4	9 1/4x4 3/4	26
Universal Rectifying Type								
236–141	**$17.50**	200	4	26(19-1-5)	2.0	7 3/4	9 1/4x4 3/4	26
Universal Rectifying and Lighting Type								
236–151	**$18.65**	240	1 1 2	15(4-8-1-1-1) 25(19-1-5) 6(5-1)	10.7 2.0 2.5	7 3/4	9 1/4x4 3/4	27
Track Type								
236–161	**$17.85**	300	1	.37–17 in 45 Equal Steps	17.9	7 3/4	9 1/4x4 3/4	29
236–171	**19.35**	300	2	.37–17 in 45 Equal Steps	9.0	7 3/4	9 1/4x4 3/4	30
236–181	**27.50**	600	2	.37–17 in 45 Equal Steps	17.9	9 3/4	10 x7 1/2	47
236–191	**31.25**	600	4	.49–17 in 35 Equal Steps	9.0	9 3/4	10 x7 1/2	51

*For 230–200, 460–400 or 575–500 primary volts, add 20%. Can also be furnished in 25–40 cycles. Prices and data upon application.

Edwards Annunciettes



No. 672

These annunciettes have been greatly reduced in size without sacrificing clearness of indication. There are 85 different indications furnished with each annunciette.

Buzz audible signal with connectors for buzz or ring extension.

Standard, 8 to 12 volts a.c. Can be furnished for d.c.

Larger sizes on application.

No. 672 Flush Manual Reset

Furnished with wall box.

Standard finish, white. Special finishes on application.

No. of Drops	Each	Arrangement Across	Arrangement Down	Overall Dimensions, Inches Height	Width	Depth
2	$14.50	2	1	4 5/8	5 7/8	3
3	15.50	3	1	4 5/8	5 7/8	3
4	16.50	4	1	4 5/8	5 7/8	3
6	20.50	3	2	4 5/8	5 7/8	3
8	23.50	4	2	4 5/8	5 7/8	3
10	28.50	5	2	4 5/8	7 7/8	3
12	33.50	6	2	4 5/8	7 7/8	3
14	39.50	5	3	6 1/4	7 7/8	3
16	43.50	6	3	6 1/4	7 7/8	3
18	48.50	6	3	6 1/4	7 7/8	3
20	53.50	5	4	7 7/8	7 7/8	3
24	63.50	6	4	7 7/8	7 7/8	3
26	71.50	7	4	7 7/8	8 7/8	3
28	79.50	7	4	7 7/8	8 7/8	3

No. 673 Desk Manual Reset

Felt covered base. Positive reset push on top of case.

Standard finishes, mahogany, oak, and walnut.

2	$30.00	2	1	2 1/2	4	2 3/4
3	35.20	3	1	2 1/2	4	2 3/4
4	41.60	4	1	2 1/2	5	2 3/4
6	54.40	6	1	2 1/2	7	2 3/4
8	67.20	8	1	2 1/2	9	2 3/4
10	80.00	5	2	3 9/16	7	2 3/4
12	92.80	6	2	3 9/16	7	2 3/4
14	105.60	7	2	3 9/16	9	2 3/4
16	118.40	8	2	3 9/16	9	2 3/4
18	131.20	9	2	3 9/16	11	2 3/4
20	144.00	10	2	3 9/16	11	2 3/4

No. 82 Surface Manual Reset

Standard finish, black.

2	$11.50	2	1	4 3/8	5 1/4	2 1/2
3	12.50	3	1	4 3/8	5 1/4	2 1/2
4	13.50	4	1	4 3/8	5 1/4	2 1/2
6	17.00	3	2	4 3/8	5 1/4	2 1/2
8	20.50	4	2	4 3/8	5 1/4	2 1/2
10	25.50	5	2	5	7 3/16	2 1/2
12	30.50	6	2	5	7 3/16	2 1/2
14	36.80	5	3	7 3/16	7 3/16	2 1/2
16	40.50	4	4	7 3/16	7 3/16	2 1/2
18	45.50	5	4	7 3/16	7 3/16	2 1/2
20	50.50	5	4	7 3/16	7 3/16	2 1/2
24	60.50	6	4	7 3/16	8 3/8	2 1/2

Edwards Dixie and San-Fer-Ann Annunciators

Hand Reset

6 Volts D.C. or 8 Volts A.C.

Schedule T

All metal case, surface types. No. 80 drop is used. Indication is black on a white background; cards are interchangeable.

Audible signal is a specially designed buzzer.

Standard finish of No. 81, black; No. 91, white.

Weight is for annunciator in shelf package.

No. of Drops	No. 81 Dixie Each	No. 91 San-Fer-Ann Each	Arrangement Across	Arrangement Down	Dimensions, Inches Height	Width	Depth	Wt., Lbs.
2	$11.50	$12.08	2	1	4 3/4	6 7/8	2 7/8	3
3	12.50	13.13	3	1	4 3/4	6 7/8	2 7/8	3
4	13.50	14.18	4	1	4 3/4	6 7/8	2 7/8	3
6	17.00	17.85	3	2	7	6 7/8	2 7/8	4
8	20.50	21.53	4	2	7	6 7/8	2 7/8	4
10	25.50	26.78	5	2	7	8 3/8	2 7/8	5
12	30.50	32.03	6	2	7	9 7/8	2 7/8	5

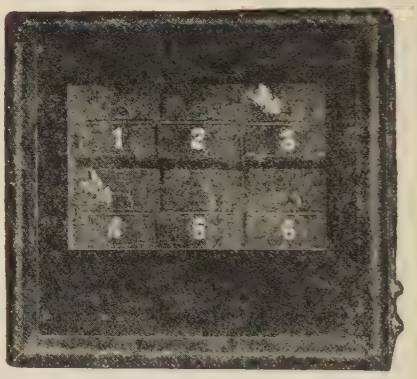
Larger sizes on application.

No. 403 Edwards Surface Type Annunciators

Electric Reset

8 Volts D.C. or 16 Volts A.C.

Schedule T



An all metal case with best quality of grained wood finish. Standard finish, black; mahogany or oak at no extra charge; special finishes, upon application.

The No. 4 drop is used. The current consumption of the drop for indicating and resetting is below the average. The audible signal is a new type double adjustment buzzer. Reset buttons are regularly furnished on case. Connectors only can be furnished without extra charge.

Weight is for annunciator in shelf package.

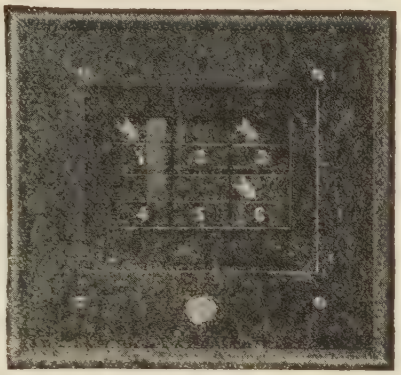
No. of Drops	Arrangement Across	Arrangement Down	Dimensions, Inches Height	Width	Depth	Weight Pounds	Price Each
4	2	2	6 1/8	5 1/8	3	3 1/4	$26.00
6	3	2	6 1/8	6 5/8	3	4	32.00
8	4	2	6 1/8	8 1/8	3	5 1/4	38.00
10	4	3	8 3/16	8 1/8	3	6	44.00
12	4	3	8 3/16	8 1/8	3	6 1/2	52.00
16	6	3	8 3/16	11 1/8	3	8 1/4	68.00
20	5	4	10 1/4	9 5/8	3	10	84.00
24	6	4	10 1/4	11 1/8	3	12	100.00
Additional Drops							5.00

No. 409 Edwards Flush Type Annunciators

Electric Reset

8 Volts D.C. or 16 Volts A.C.

Schedule T



An all metal case. Standard finish is black; mahogany or oak at no extra charge; special finishes, upon application.

No. 4 drop is used. The current consumption of the drop both for indicating and resetting is below the average.

The audible signal is a new type double adjustment buzzer. Reset buttons are regularly furnished on case. Connectors only can be furnished without extra charge.

Add 3 inches to height and width for trim. Six-foot cord included if specified.

Weight is for annunciator in shelf package.

Prices include steel wall box.

No. of Drops	Arrangement Across	Down	Dimensions, Inches Height	Width	Depth	Weight Pounds	Price Each
4	2	2	8 7/8	7	3 1/16	4 1/4	$60.00
6	3	2	8 7/8	8 1/2	3 1/16	5	66.00
8	4	2	8 1/2	10 1/4	3 1/16	6 1/2	72.00
10	4	3	10	10 1/4	3 1/16	7 1/2	78.00
12	4	3	10	10 1/4	3 1/16	7 3/4	86.00
16	6	3	10	13 1/4	3 1/16	10 1/2	102.00
20	5	4	12	11 3/4	3 1/16	11	118.00
24	6	4	12	13 1/4	3 1/16	12 1/2	134.00
Additional Drops							5.00

No. 413 Edwards Desk Type Annunciators

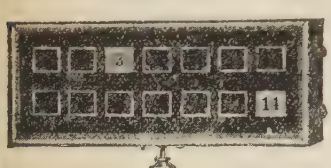
Electric Reset

8 Volts D.C. or 16 Volts A.C.

Schedule T

Standard finish black. No. 4 drop. Felt-covered bottom. Six-foot cord included if specified.

No. of Drops	Arrangement Across	Down	Dimensions, Inches Height	Width	Depth	Weight Pounds	Price Each
3	3	1	4	6	3 1/8	3	$44.00
4	4	1	4	7 1/2	3 1/8	3 1/2	52.00
5	5	1	4	9	3 1/8	4	60.00
6	6	1	5 1/2	6	3 1/8	4 1/2	68.00
8	8	1	5 1/2	7 1/2	3 1/8	5 1/2	84.00
Additional Drops. Add per Drop							8.00



No. 813 Edwards Railway Annunciators

Hand Reset

6 Volts D.C. or 8 Volts A.C.

Schedule T

Metal case, surface type; mahogany finish unless otherwise specified. No. 156 Monitor bell for mounting.

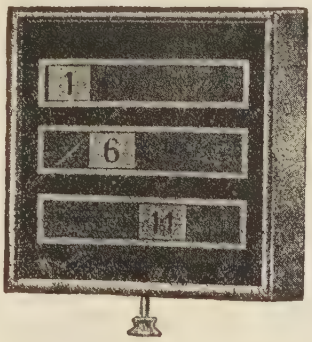
No. of Drops	Arrangement Across	Down	Dimensions, Inches Height	Width	Depth	Weight Pounds	Price Each
10	5	2	5 1/2	10 1/4	2 5/8	4 1/2	$42.98
12	6	2	5 1/2	11 3/4	2 5/8	5	51.60
14	7	2	5 1/2	13 1/4	2 5/8	6	60.18
16	8	2	5 1/2	14 3/4	2 5/8	7	68.82
18	9	2	5 1/2	16 1/4	2 5/8	8 1/2	77.40
20	10	2	5 1/2	17 3/4	2 5/8	10	85.90
22	11	2	5 1/2	19 1/4	2 5/8	11 1/4	94.50
24	12	2	5 1/2	20 3/4	2 5/8	12 3/4	102.84
Additional Drops, per Drop							5.50

No. 807 Edwards High Voltage Annunciators

Hand Reset

110 and 220 Volts, A.C. or D.C.

Schedule T



Has metal case with double micarta backboard on which are mounted No. 80 drops.

Care has been given to insulation of all current carrying parts, eliminating all materials affected by heat or moisture.

Prices include a No. 100 3-inch Recti bell which may be installed adjacent to the annunciator or where desired. Annunciator is wired with marked connectors for this purpose. For central stations there are usually conditions requiring special features. Photographs and descriptions of annunciators for this service will be sent upon request.

Surface type metal case; standard finish is black.

The 110 and 220 volts a.c. or d.c. are standard; other voltages on application.

Special finishes, upon application.

Prices shown are for 110 volts a.c. or d.c.

No. of Drops	Arrangement Across	Down	Dimensions, Inches Height	Width	Depth	*Weight Pounds	Price Each
4	4	1	5 5/8	7 3/4	3 1/4	7	$62.00
6	3	2	7 7/8	6 3/8	3 1/4	8	74.00
8	4	2	7 7/8	7 3/4	3 1/4	10	91.00
10	5	2	7 7/8	9 3/8	3 1/4	12	102.00
12	4	3	7 7/8	10 3/4	3 1/4	14	124.00
Additional Drops. Add per Drop							16.00
For 220 Volts, Add per Drop							2.00

*Approximate, per article in shelf package.

Edwards Annunciators

Special Annunciator Features

Schedule T

No. 8 Manual Reset Drops

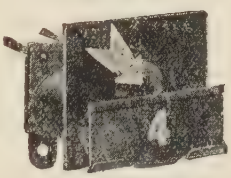
New, efficient drop used in all annunciators.

No. 8.....each $4.00

No. 80 Hand Reset Drops

Used in all hand reset annunciators.

No. 80.....each $4.00



No. 4 Electric Reset Drops

Used in all electric reset annunciators. The indication is a white arrow which points directly at the name card. When reset, arrow drops out of sight behind name card. Front is of plain glass and a dull black background, it can be seen from any angle. Cannot shake or jar out of adjustment. Locked in normal position; cannot indicate until current is passed through magnets.

No. 4.....each $6.00

Extras

Up to 24 volts d.c. or a.c. no charge. For 25 to 40 drops, add per drop, $1.00.

For special commercial finishes, add per annunciator: 4 to 10 drop, $6.00; 12 to 24 drop, $8.00; 26 to 52 drop, $12.00; over 52 drop, $16.00. For solid bronze or brass cases, add per annunciator: 4 to 10 drop, $12.00; 12 to 24 drop, $20.00; 26 to 52 drop, $30.00; over 52 drop, $50.00.

Individual reset, with pushes on case, per push, $4.00; with terminals only for remote control, per terminal, 60 cents.

Arrangement of drops, same addition as for special finishes. Special markings, other than number, per drop, 30 cents.

Bell instead of buzzer, each $3.00.

Switch on case, 1 or 2 point, each $3.50.

Edwards Lamp Annunciators

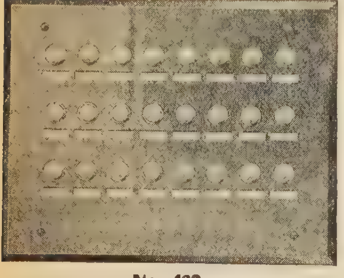
Schedule T

OPERATION.—If locking pushes, toggle or push button switches are used, the lamps will remain lighted while the switch is on and will be extinguished while the switch is off. If standard momentary contact pushes are used, relays are supplied in a separate case with the reset button on the annunciator. If specified, relays can be mounted in the annunciator case, which, however, adds greatly to its size and does not improve its appearance.

In ordering, specify exact operating voltage, finish, with or without relays; if with relays, whether they are to be in separate case or in annunciator; if opaque glass type, whether 7/8 or 1¾-inch numerals.

Bull's Eye Type

No. 421, For Surface Wall Mounting
No. 422, For Flush Wall Mounting
No. 423, For Desk



No. 422

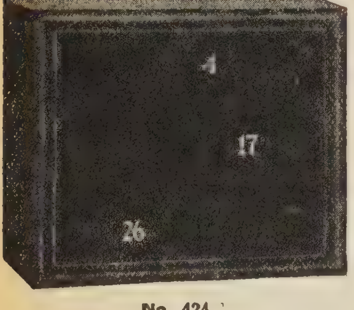
Equipped with 5/8-inch opal signals arranged over card racks. Lamps are easily changed from front by removing opals. All metal case and trim.

Standard finish, brush brass or bronze for flush type; black or mahogany for surface types.

Illustration shows standard method of construction with all mechanism on back of front plate, which is mounted directly on metal wall box. In larger size annunciators it is advisable for easier installation to have front plate hinged to a trim which fastens directly to metal wall box. This method of construction can be followed if specified.

Opaque Glass Type

No. 424, For Surface Wall Mounting
No. 425, For Flush Wall Mounting



No. 424

For use where it is advisable to have indications readable from a distance.

Lamps are in individual shield units; when lighted cause numerals to show plainly through opaque glass.

All metal case and trim. Standard finish, black or mahogany.

Made in 2 styles: for 7/8 or 1¾-inch numerals.

Prices shown are for 7/8-inch numerals.

Standard up to 32 Volts A.C. or D.C.—Schedule D

No. of Lamps	Bulls Eye Types: Nos. 421 and 422 Each	Bulls Eye Types: No. 423 Each	Opaque Glass Types: Nos. 424 and 425 Each	Add for Relays Each
2	......	$71.00	......	$25.00
4	$71.00	90.00	......	41.00
6	91.00	110.00	$80.00	48.00
9	110.00	140.00	92.00	72.00
12	141.00	170.00	104.00	96.00
16	181.00	200.00	118.00	128.00
20	221.00	240.00	129.60	160.00
25	235.00	310.00	147.30	200.00
30	275.00	......	171.20	240.00
36	312.00	......	200.00	288.00
42	341.00	......	230.00	336.00
48	369.00	......	260.00	384.00
56	407.00	......	300.00	448.00
Larger Sizes, Add per Lamp..	5.00	......	5.00	*8.00

*Per relay.

Price on application for 110 volt.

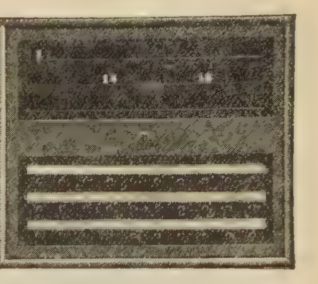
Larger sizes of No. 423 Desk, prices on application.

No. 10 Edwards Return Call Annunciettes

Hand Reset

Standard Voltage, 8-12 Volts A.C.

Schedule T



Used in hotels, institutions, etc. for the purpose of calling the room and receiving acknowledgment from the room that the call has been heard, or vice versa.

Designed to eliminate the large number of wires necessary if the standard annunciator, bells and pushes are used. Presents reduction in size without affecting clearness of indication.

All metal case, surface type, in black, mahogany or oak.

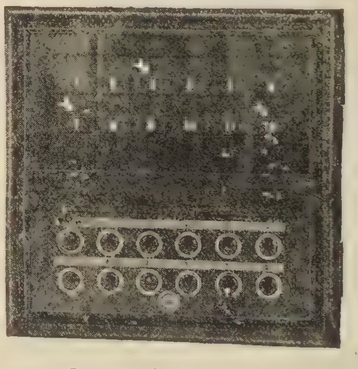
No. of Drops	Each	Arrangement: Across	Arrangement: Down	Dimensions, Inches: Height	Dimensions, Inches: Width	Dimensions, Inches: Depth
16	$140.00	8	2	8⅝	11	3½
20	152.00	7	3	11	10	3½
25	176.00	9	3	11	12	3½
30	197.00	9	4	13⅜	12	3½
40	252.00	10	4	13⅜	13	3½
50	307.00	10	5	15¾	13	3½
60	351.00	12	5	15¾	15	3½
70	397.00	12	6	18⅛	15	3½
80	448.00	14	6	18⅛	17	3½
90	495.00	15	6	18⅛	18	3½
100	540.00	15	7	20½	18	3½

No. 415 Return Call Annunciators

Electric Reset

8 Volts D.C. or 16 Volts A.C.

Schedule T



Used for the purpose of calling the room and acknowledging from the room that the call has been heard and vice versa. With No. 4 drop.

The standard arrangement is one reset for every 20 drops. This annunciator allows the individual resetting of each drop where desired.

Surface type. Standard finish is black; mahogany or oak at no extra charge. Special finishes, upon application.

No. of Drops	Each	Arrangement: Across	Arrangement: Down	Dimensions, Inches: Height	Dimensions, Inches: Width	Dimensions, Inches: Depth	Weight Pounds
25	$221.00	9	3	16⅝	17¼	3⅝	23
30	247.00	10	3	16⅝	18¾	3⅝	25
36	283.00	9	4	20⅝	17¼	3⅝	28
42	331.00	11	4	20⅝	20¼	3⅝	33
49	377.00	10	5	24⅝	18¾	3⅝	37
56	416.00	12	5	23 15/16	21¾	3¾	41
64	468.00	13	5	23 15/16	23¼	3¾	46
72	512.00	15	5	23 15/16	26¼	3¾	52
81	567.00	14	6	27¼	24¾	3¾	57
90	619.00	15	6	27¼	26¼	3¾	62
100	676.00	15	7	30 9/16	26¼	3¾	69

Additional Drops.............................. **$7.00**

For flush type, add $13.00 per annunciator.

Faraday Annunciators

Electric-Reset, Clover-Leaf-Target, Regular Size All-Metal Cases

Schedule T

Reset buttons are regularly furnished on the case. Connections only can be furnished without additional charge so that annunciator can be reset from a remote point.

Round disc (⅝ inch) indications furnished instead of standard clover-leaf-target indications at same price.

Round-disc-target indications show a round white disc approximately ⅝ inch in diameter. Larger sizes than the standard can be furnished at an additional charge.

Each annunciator is furnished with 85 different markings —black characters on white background. Special markings, black on white background, add per drop, 30 cents.

Can be furnished with automatic-reset features, at no extra charge.

Multiple operation on a.c. or d.c. of not exceeding 3 annunciators, at no extra cost.

STANDARD RESETTING.—Electric-reset types are regularly furnished with one reset button for each 10 drops.

EXTRA GROUP-RESET BUTTONS.—Electric-reset annunciators are regularly furnished with one reset button for each 10 indications.

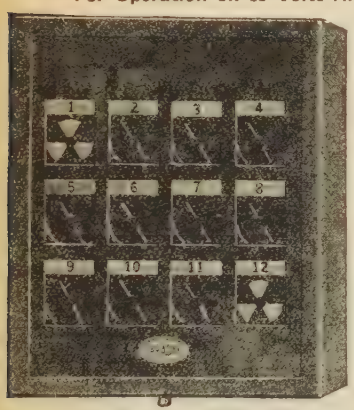
SEPARABLE DROPS.—Plug type removable, add to list price per drop, $2.00.

Standard finishes: Surface type and desk type—black-velvet enamel, mahogany, walnut or golden oak; flush type—black-velvet enamel, white enamel, mahogany, walnut or golden oak.

Standard package, 1.

Cat. No. 25-RM—Surface Type

For Operation on 18 Volts A.C. or 8 Volts D.C.



Will be wound up to 24 volts a.c. or d.c. at no additional charge.

Black-velvet enamel finish will be shipped unless otherwise specified.

No. of Drops	Black-Velvet Enamel Each	White Enamel Each
4	$26.00	$27.30
6	32.00	33.60
8	38.00	39.90
10	44.00	46.20
12	52.00	54.60
14	60.00	63.00
16	68.00	71.40
18	76.00	79.80
20	84.00	88.20
24	100.00	105.00
Add to List Price for Each Additional Drop..	5.00	5.25

Cat. No. 15-RM—Flush Type

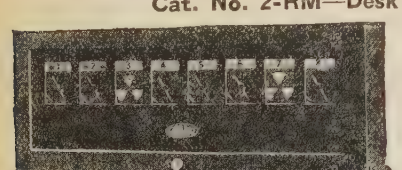
Furnished complete with back box.

White enamel finish shipped unless otherwise specified.

No. of Drops	Black-Velvet Enamel Each	White Enamel Each	No. of Drops	Black-Velvet Enamel Each	White Enamel Each
4	$60.00	$60.00	14	$94.00	$94.00
6	66.00	66.00	16	102.00	102.00
8	72.00	72.00	18	110.00	110.00
10	78.00	78.00	20	118.00	118.00
12	86.00	86.00	24	134.00	134.00

Add to List Price for Each Additional Drop..... $5.00
For Hinged Door Add to List Price..... 10.00
For Omitting Back Box Up to 12 Drops, Deduct..... 1.00
For Omitting Back Box 14 Drops and Over, Deduct. 5.00

Cat. No. 2-RM—Desk Type



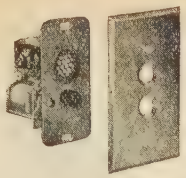
Furnished with 6-foot cord attached and terminal block.

Desk type inclined pattern furnished at same price.

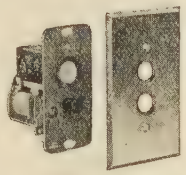
No. of Drops.....	3	4	5	6	8	10
Each.....	$44.00	52.00	60.00	68.00	84.00	100.00

Add to List Price for Each Additional Drop..... $8.00

Edwards Ansercall for Return Call Systems



No. 139



No. 140

This device replaces return call stations except for d.c. operation. Fits any standard single gang switch box 2⅜ inches deep and takes standard push-button-switch plates.

Buzz audible signal with no contacts, pivots or adjustment. May be varied after installation from loud low tone to a soft high tone through hole in sub-plate.

No. 140 has Annunciette type drop which leaves a visual signal. Operation of push button, when call is answered, automatically resets drop.

Standard, 8 to 12 volts, a.c.

Prices do not include plates.

No. 139, Non-Indicating....each $4.80
No. 140, Indicating.....each 9.30

No. 136 Edwards Surface Return Call Stations

Schedule T

Designed for installation in existing buildings. Provides a neat appearing plate mounted on a shallow cast box which provides entrance for conduit or open wires as desired. The audible signal is an Edwards Double Adjustment Lungen Buzzer, and the station is completely wired for installation with the special Edwards No. 265 Return Call Push.

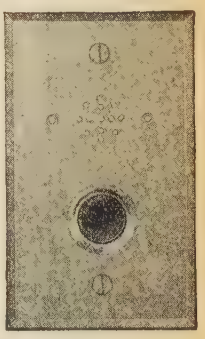
The cast box is rubberoid black, the plate is brushed brass or nickel. Special finishes, upon application.

Bakelite plate can be furnished if desired at an additional charge of 25 cents. Weight, 1½ pounds.

Price, No. 136.....each $6.00

No. 137 Edwards Flush Return Call Stations

Schedule T



A flush plate of pleasing design for mounting on a standard single gang switch box. The audible signal is an Edwards Double Adjustment Lungen Buzzer, and the station is completely wired for installation with the special Edwards No. 265 Return Call Push

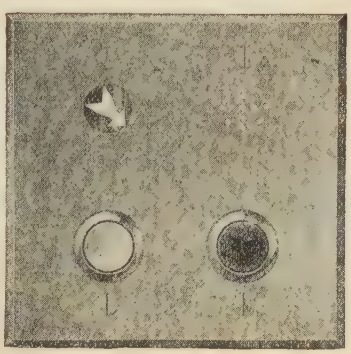
Standard finish is brushed brass or nickel plate. Special finishes, upon application.

Bakelite plate can be furnished if desired at an additional charge of 25 cents.

Weight, ½ pound.

Price, No. 137.....each $5.00

No. 138 Edwards Indicating Return Call Station—*Schedule T*



For use where it is desirable to indicate that a call has been made to the room during the occupant's absence.

It fits a standard 2-gang switch box. The audible signal is a Double Adjustment Lungen Buzzer. The visible signal is a white arrow outlined through a small round glass window. One push button is for the return call, the other to reset the indicating arrow.

Price, No. 138, Push and Buzzer, Wt. 1 Lb.....each $12.00

Edwards Elevator Annunciettes

No. 130

Hand Reset

Standard Voltage, 8-12 Volts A.C. or D. C.

Schedule T

Presents a reduction in size without affecting clearness of indication.

Buzz audible signal.

Smooth, sturdy, reliable reset.

No. 130D, the up and down type, is equipped with reset push for each column of indications.

Order and price by number of drops not by number of floors.

Standard finish, black. Mahogany or oak, no extra charge.

Special finishes upon request.

No. of Drops	No. 130—Single Row Each	Height	Width	Depth	No. 130D Up and Down Type Each	Height	Width	Depth
		Dimensions, Inches				Dimensions, Inches		
3	$18.50	7¼	2½	2½	.....	....	.	...
4	19.50	7¼	2½	2½	$23.25	....	.	...
5	21.40	9¾	2½	2½	.....	....	.	...
6	23.25	9¾	2½	2½	27.10	7⅜	4	2½
7	25.25	12¼	2½	2½	.....	....	.	...
8	27.25	12¼	2¼	2½	32.25	7⅜	4	2½
9	29.25	14¾	2½	2½	.....	....	.	...
10	31.25	14¾	2½	2½	36.25	10⅛	4	2½
11	33.25	17¼	2½	2½	.....	....	.	...
12	35.00	17¼	2½	2½	42.50	10⅛	4	2½
13	40.00	12⅞	4	2½	.....	....	.	...
14	45.00	12⅞	4	2½	52.50	12⅞	4	2½

Larger sizes, add per drop, $4.00.

Nos. 414 and 414D Edwards Elevator Annunciators

No. 414

Electric Reset

8 Volts D.C. or 16 Volts A.C.

Schedule T

Standard finish, black.

Arrangement: Up to 10 drops single column of drops; over 10, 2 columns of drops; No. 414D in 2 columns, Up and Down.

In ordering No. 414D, give number of drops and marks for drops.

Flush type add $30.00.

No. 414D

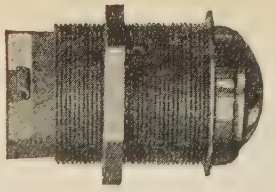
No. 414—Standard Type

No. of Drops	Height	Width	Depth	Weight Pounds	Price Each
	Dimensions,				
4	9¾	3½	3	2½	$36.00
5	11¾	3½	3	3	39.00
6	13¼	3½	3	3½	42.00
7	15¼	3½	3	4	45.00
8	16¾	3½	3	4¾	48.00
10	20¼	3½	3	5½	54.00
12	13¼	5½	3	6	62.00
14	15¼	5½	3	7½	70.00
16	16¾	5	3	8½	78.00
18	18¾	5	3	8¾	86.00
20	20¼	5	3	9¼	94.00

No. 414D—Up and Down Type

No. of Drops	Height	Width	Depth	Weight Pounds	Price Each
6	8¼	5½	3	3¾	$52.00
8	9¾	5½	3	5	58.00
10	11¾	5½	3	5¾	64.00
12	13¼	5½	3	6¼	72.00
14	15¼	5½	3	7¾	80.00
16	16¾	5½	3	8¾	88.00
18	18¾	5½	3	9	96.00
20	20¼	5½	3	9½	104.00
Additional Drops					7.00

Kirkland Bulls-I-Units



A device for effecting visual signals without the usual complex installation and maintenance problems. Unit is a complete annunciator, consisting of a light chamber, terminal block, socket, lens cap (removed from front) and a symbol insert, all in one. Adapted for all kinds of visual signal work, particularly in the construction of lamp annunciators. For all kinds of control devices, panel boards, etc.

The usual jeweled lens of the beehive type can be supplied in red, green or fiery opal; also in clear white inside frosted type.

Clear type lens employs colored inserts behind lens and until lamp is lighted shows white, regardless of color of insert. When lamp lights, color shows brilliantly and is seen from every angle. Numbers, letters and symbols of the sticker type can be placed between lens and insert and can be seen clearly from a distance when lamp lights, although invisible until then.

To mount it is only necessary to drill a hole for each bulls-eye and slip unit in place, locking nuts on threaded sections in rear of panel or plate.

A variety of lamps can be furnished with No. 600 unit. The G6 or elevator lamp and flashlight lamps can be used for voltages from 3 to 24 volts; S6 lamp for 120 volts.

Style of insert: No. 600, white; No. 601, red; No. 602, green; No. 603, yellow; No. 604, signal blue.

Style of finish: CHR, standard chromium; SRB, statuary bronze; BRA, brass.

When ordering, give number and finish letters.

Made in two standard sizes. No. 600 has a lens 1$\frac{1}{16}$ inch in diameter and requires a 1⅜-inch mounting hole. Overall length, 2$\frac{5}{16}$ inches.

No. 500 is for low voltage elevator T lamps only; has a lens ¾ inch in diameter and requires a ⅞-inch mounting hole. Prices on application.

No. **600** Unit, with Clear Lens and Insert or Jeweled Lens, as Desired............................each **$1.50**

Kirkland Bulls-I-Plaques

A practical development for the application of bulls-eye (pilot lights) with lettering or numbering, to panel boards, electrical devices and for all remote control visual indication purposes.

Cast in genuine solid bronze, aluminum or in nickel-silver; size, shape, lettering and numbering to order. Standard lettering or numbering is block type; all letters are raised and polished. Background is stippled and oxidized. Border may be plain, raised single flat-band, raised double flat-band or filed bevel edge. Special shapes or styles of lettering and numbering, trade-marks, monograms, etc., are extra.

Approximate thickness of plaque, $\frac{3}{16}$ inch.

Square or Long Type Plaque, Including Raised Letters or Numbers...................per square inch **$.15**

Minimum Charge for Square or Oblong Plaque..each **3.30**

Circular Type, 2⅞ Inch Diameter, Including Raised Letters or Numbers..........................each **2.25**

Special circular plaques furnished in any diameter. Furnished in brass if desired; add 5% for chromium finish.

When ordering specify: horizontal or vertical type of plaque; number of bulls-eyes to be on plaque; types of lens and color of bulls-eyes; type of border and finish of plaque; lettering or numbering on plaque; type, voltage and capacity of switches; also send rough sketch.

Faraday Separable Connectors

For Flush or Surface Wall, Floor or Desk Mounting Types SCP, SCC, SCWF, SCDC, SCDP and No. 922,

Schedule D—Types SCA and SCB, Schedule T

Designed to provide means for perfect mechanical and electrical connections between the terminals of two cables where it is desired that they be easily disconnected for alterations, testing, etc. This applies especially to connection between rigid cable installed in conduit and flexible cables for annunciators, telephones, push-buttons, etc., either at the floor, wall, or at an office desk.

One half of the separable connector has contact points which are plugged into contact clips of the other half.

Made of bakelite having embedded therein either 4 or 10 terminal connectors; housed in solid bronze shell.

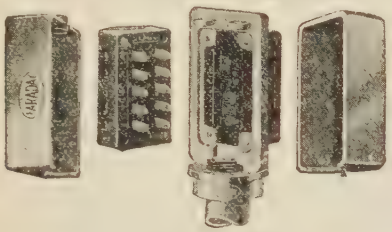
Standard package, 1.

Type SCP Connectors Only—Without Bronze Shell

No. SCP- 4, 4-Terminal Connector.....each $8.00
No. SCP-10, 10-Terminal Connector.....each 10.00

Connectors with Housings

Type SCC—For Floor Connection

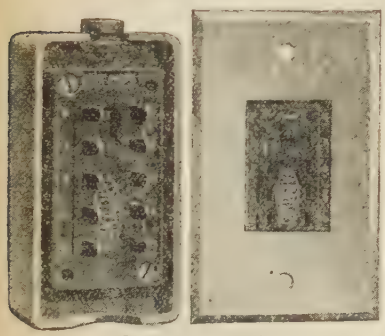


Parts Comprising Type SCC

Standard size nipples for Nos. SCC-4 and SCC-10 are ¾ inch; over 10 number standard size nipple is 1 inch.

Cat. No.	SCC-4	SCC-10	SCC-20	SCC-30	SCC-40
No. of Terminals	4	10	20	30	40
Each	$16.00	20.00	34.00	49.00	64.00

Type SCWF—For Flush Wall Mounting



Cat. No. SCWF-10

Cat. Nos. SCWF-4 and SCWF-10 fit a standard single-gang switch box. Each additional 10 numbers take additional gang switch box.

Cat. No.	Each	No. Terminals
SCWF- 4	$12.00	4
SCWF-10	16.00	10
SCWF-20	30.00	20
SCWF-30	40.00	30
SCWF-40	50.00	40

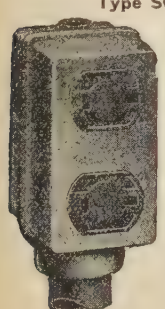
Type SCDC—With Bushed Hole for Cable

Cat. No.	SCDC-4	SCDC-10	SCDC-20	SCDC-30	SCDC-40
No. Terminals	4	10	20	30	40
Each	$12.00	16.00	26.00	36.00	46.00

Type SCDP—With Tapped-Conduit Connection

Cat. No.	SCDP-4	SCDP-10	SCDP-20	SCDP-30	SCDP-40
No. Terminals	4	10	20	30	40
Each	$12.00	16.00	26.00	36.00	46.00

Type SCA—With Duplex Convenience Outlets



Cat. No. SCA-2

Cat. No.	SCA-2	SCA-4	SCA-8
No. of Outlets	1	2	4
No. Connections	2	4	8
Each	$10.00	15.00	20.00

Type SCB—With Desk Buzzer

Type SCB, with Desk Buzzer in SCC-10 Shell.....each $20.00

No. 922 Portable Type Connectors

Designed to meet conditions where it is desired that separable connector be portable. Housings are of cast aluminum.

Made in 10-terminal units (5 pairs) only.

No. 922.....each $40.00

Faraday Interconnection-Strips

Schedule T

Designed to facilitate cable-terminal-interconnection for annunciators, push buttons, telephones, etc., and to eliminate splices.

No. CS-26

These strips provide time and labor saving means for fanning out and separating the conductors of cables without the costly forming or lacing of old time methods and for attaching them to their respective terminal locknuts in a neat way. By the use of Faraday Interconnection-Strips testing of the wire circuits is greatly facilitated, at any time, and changes in and additions to the wiring may be easily effected.

Height, 7 21/32 inches; depth, 2 3/16 inches. Metal channel space, 1 1/8 inches.

Standard package, 1.

Cat. No.	Each	Description	Width In.
CS -26	$3.00	Strip Only with 26 Terminals (13 Prs.)	1 13/16
CSM-26	7.00	Same as Above, with Metal-Channel Mounting Form and Numbered Forming Strip	2 5/8
CSM-52	12.00	Same as No. CSM-26, but has Strip for 52 Terminals (26 Pairs)	4 5/16

No. CSC-1 Faraday Interconnection-Cabinets

Flush and Surface Types

Schedule T

Cabinets have installed therein a panel upon which is mounted one or more Faraday Interconnection-Strips and the necessary number of 5-point fused battery strips. The black enameled steel cabinet is provided with door and spring lock. May be furnished, at extra cost, with gutters similar to those of lighting panel boxes so that cables may be concealed.

Standard package, 1.

No. CSC-1 Surface Cabinet with One 52-Terminal (26 Pairs) Interconnection-Strip and One 5-Wire Fused Battery Strip.....each $36.00
Add for Each Add. 52-Ter. Interconnection-Strip... 13.00
Add for Each Add. 26-Ter. Interconnection-Strip... 8.00
Add for Each Add. 5-Wire Fused Battery Strip..... 11.00

Flush cabinets at same prices as surface cabinets.

Faraday Fused Battery Strips

Schedule T

No. FBS-5

Designed to provide fuse-protection on low voltage circuits.

Height, 1 3/8 inches; width, 3 inches. Standard package, 1.

With Knife Switches

Cat. No.	Each	No. Wires	Lgth. In.
FBS-3	$8.00	3	3 1/4
FBS-5	10.00	5	4 5/8

With Locknut Connections

FBL-3	$7.00	3	3 1/4
FBL-5	9.00	5	5 5/8

No. FB-100, Renewal Glass-Tube Fuses.....each $.06

Faraday Heavy Terminal Strips for Large Size Wires

Schedule T

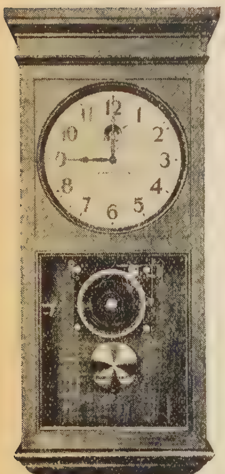
Base is solid ½-inch bakelite with extra heavy non-turning brass studs, numbered, as specified. Each wire can pass through a hole opposite its individual post, thus eliminating the use of forming strips. Terminals are 5/32 locknut pattern.

Standard package, 1.

Cat. No.	915	916	917	918	919
No. Pairs of Terminals	5	10	15	20	25
Each	$5.00	8.00	11.00	14.00	17.00

Type P-160 Self-Winding Adjustable Program Clocks

24-Hour Schedule



An automatic clock combined with a program device. Used as a master clock to control a system of clocks as well as to operate programmed signal system.

The only clock of this type that can be checked hourly with official time by connection with local Western Union Time Service.

Oak or birch case finished to match trim. Height, 41¼ inches; width, 18½ inches; depth, 7⅜ inches; 12-inch dial. Movement: 80 beat, spring-driven, pendulum-controlled. One hour's reserve power.

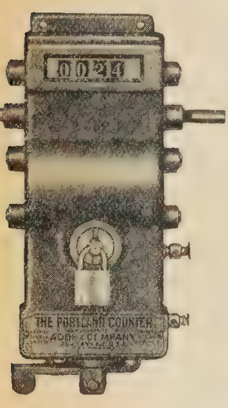
Program device sounds 4 second signals any 5 minute period of day. Time of sounding signals easily adjusted by rearranging pins on program disc. Can operate a number of different schedules concurrently. Can be equipped with contact for silencing bells. Operates any number of signals. One-bell installations can be furnished in compact units with bell mounted on side of clock case.

Operation: 110 volt a.c. through transformer rectifier, or dry cell batteries direct.

Large installations requiring a number of bells, need additional relay and transformer rectifier to furnish extra power for bells. These are furnished at extra cost.

Complete descriptive bulletins and prices gladly quoted on application.

Portland Anyset Count Controllers



A rugged heavy duty instrument designed to automatically maintain a uniform count of production, tallied in predetermined units.

Can be quickly and easily set to any number within the capacity of the instrument so that when desired quantity has been tallied a warning is given, either by bell or light, and a switch is thrown which may be utilized to stop the machine or to perform certain necessary operations at that point. On this particular type of register, resetting is unnecessary to repeat the cycle.

Adapted for speeds up to 500 counts per minute. The electric switch will carry 110 volts; for higher capacities an additional starter switch is necessary. Brake-stop switches may be used for an instantaneous machine stop. Terminal posts are provided for alarm signals for either bell or light operating from dry cell current.

The controller being automatic in its control features, can be used to operate a battery of machines where a limited counting, timing or measuring operation is necessary.

Size of heavy dustproof case, 10¾x4x3¾ inches.

When ordering specify motor ratings. Starting and brake-stop switches are extra. Controller may be obtained for either rotary or reciprocating movements. A right-hand register has actuating shaft on right hand side when facing register as illustrated; left-hand controller has shaft on left. Special fittings to suit individual requirements are designed on request.

3-Figure Capacity	each	**$29.25**
4-Figure Capacity	each	**37.25**
5-Figure Capacity	each	**45.25**

Edwards Non-Code Fire Alarm Stations

6 to 110 Volts

Underwriters Approved

No. 224 Flush Break-Glass Station

No. 224

With hinged front so test operation is same as actual alarm operation. Size, 3 7/16x4⅜ inches, to fit standard single switch box. Test key, hammer and chain with each station. Open circuit type furnished if not specified. Finish, red enamel.

Weight, 1 pound.

Price, No. **224**, Open Circuit	each	**$7.50**
Price, No. **224C**, Closed Circuit	each	**7.50**

No. 225 Surface Break-Glass Station

Same as above but with cast fitting for surface wiring. Fitting can also be mounted on standard switch box for use with concealed wiring but where it is desired to have stations protrude from wall to be visiblefrom a distance.

Weight, 3¼ pounds.

Price, No. **225** Open Circuit	each	**$9.50**
Price, No. **225C** Closed Circuit	each	**9.50**

No. 77 Surface Break-Glass Stations

Low Voltage Only

No test. Open circuit only.

Diameter, 3¾ inches.

Standard finish, polished brass rim, red center.

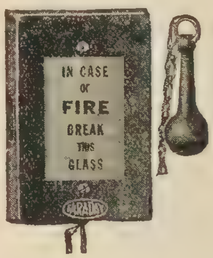
Weight, 7 ounces.

Price, No. **77**	each	**$2.90**
Price, Glass for Any Station	each	**.44**
Price, Hammer and Chain for Any Station	each	**.60**

No. 2077 Faraday Surface Type Fire Alarm Boxes

Open-Circuit, Non-Code-Ringing

Schedule D



A break-glass box, English vermilion finish; non-conduit installations.

Height, 4¾ inches; width, 3 inches; thickness, ¾ inch.

For systems where it is not required that location of box from which signal originates be indicated by automatic code-ringing of gong and where failure of operative current or derangement of circuits or apparatus is not required to be automatically indicated.

No. **2077** .... each **$2.90**

Extra glasses, 44 cents; chain and hammer, 60 cents.

No. 2024 Faraday Flush Type Fire Alarm Boxes

Open or Closed-Circuit

Schedule D

A break-glass box, finished in glossy English vermilion.

Fits a standardoutlet box for conduit.

Height, 4⅜ inches; width 3⅞ inches.

For fire alarm systems where it is not required that location of box be indicated.

Can be furnished hinged hammer type in place of chained hammer type at same price.

No. **2024** .... each **$7.50**

Extra glasses, 44 cents; chain and hammer, 60 cents.

Industrial Fire Alarm Systems

Industrial fire alarm systems are particularly designed and suitable for factories, schools, colleges, public institutions, hotels, theatres, office buildings, department stores, warehouses, apartment houses, etc. in fact for every class of building where life and property should be protected from fire hazard, but with full consideration that such a fire alarm system must be dependable, yet simple and economical, both as to initial cost and maintenance.

Industrial fire alarm systems may be classified in 2 general types:

Electrically-Supervised Closed-Circuit Code and Non-Code Ringing for local drill alarm purpose and for connection to municipal fire alarm systems.
Non-Supervised Open-Circuit Code and Non-Code Ringing Systems.

Closed-Circuit Systems

Under the closed-circuit systems the following may be furnished:

Plain Code Systems in which the operation of a station lever causes all audible devices such as gongs, horns, etc. to sound a pre-determined code indicating the point of origin of the alarm.

Pre-Signal Code Systems in which the first operation of a station lever causes a code to be sounded on certain audible signals, known as pilots. The second operation of the station by means of a special key will cause the code to be sounded on all audible devices, both pilots and general.

Positive Non-Interfering Code System features may be included in either the plain or pre-signal code systems mentioned above. These features prevent the jumbling of the code signal in the event of more than one station being operated at or about the same time.

Master Code Systems in which one standard code is used this code indicating "Fire" but where the exact location of fire is not required.

Institutional Auxiliary Systems in which the operation of a station lever by a person, equipped with the proper key, causes a code to be sounded on all audible signals within the building for drill purposes. In the event of an actual fire the operation of the station lever will cause an alarm to be sounded on all audible devices within the building, and at the same time will transmit a signal over the municipal fire alarm circuits indicating the building on fire.

General Alarm Non-Code Systems on which the breaking of glass in the station operates all signals continuously until glass is replaced or circuit switch is opened.

Open-Circuit Systems

Under the open-circuit systems the following may be furnished:

Plain Code Systems in which the operation of a station lever causes all audible devices to sound a pre-determined code indicating point of origin of the alarm.

Master Code Systems in which one standard code is used, this code indicating "Fire" but where the exact location of fire is not required.

General Alarm Non-Code Systems in which the breaking of glass in station operates all audible signals continuously until glass is replaced or circuit switch is opened.

Annunciator Alarm Systems in which the breaking of glass in station operates a corresponding drop on an annunciator indicating point of origin of alarm and also operating audible signals.

Fire Alarm Boxes

Fire alarm boxes for industrial fire alarm systems are manufactured in 6 types, to meet all conditions of fire alarm service as follows:
Positive Non-Interfering Type Code-Ringing Closed-Circuit.
Plain Type Code-Ringing Closed-Circuit
Pre-Signal Type Code-Ringing Closed-Circuit.
Double-Code-Ringing Type Closed-Circuit.
Shunt-Type Non-Interfering Code-Ringing Closed-Circuit.
Open-Circuit Type Non-Code-Ringing.
Code ringing closed-circuit fire alarm boxes are subdivided into the following groups:
Enclosed Pull-Lever Surface and Semi-Flush.
Break-Glass Pull-Lever Surface and Semi-Flush.
Weatherproof Pull-Lever Surface.
Weatherproof Break-Glass Pull-Lever Surface.

Sounding Devices

Sounding devices for fire alarm systems are designed with the utmost care to afford the maximum of protection through dependable operation. Dependability is the more important as fire alarm sounding devices may remain idle for long periods of time and yet must be so constructed that, when the need arises, they function instantly and satisfactorily.
Sounding devices are divided into 2 general classes, viz.:
Electrical Sounding Devices.
Mechanical Sounding Devices.
Electrical sounding devices are predominant for use in fire alarm systems and comprise:
Straight Electric Signal Gongs—Single Stroke and Vibrating.
Electro-Mechanical Signal Gongs.
Small Electric Sirens.
Motor-Driven Horns and
Vibrating Horns.
Mechanical sounding devices consist of compressed air horns.

Fire Alarm Control Cabinets

For regular, pre-signal or dual-operated and double code fire alarm systems.

Fire alarm control cabinets are designed for the control and supervision of Fire Alarm Circuits. They consist of ebony asbestos or slate panels having mounted thereon necessary controller-relays. Trouble-relays, time-limit-cut-outs, meters, terminals, fuses, etc., all being enclosed in heavy pressed steel fireproof cabinets with Yale locked doors. Glass windows are provided in doors to permit ready reading of meters without opening the doors.

Fire Alarm Apparatus

Fire alarm apparatus is steadily being improved in quality and design from year to year and is guaranteed to be electrically and mechanically perfect. Particular attention, however, is called to the necessity of proper installation and maintenance if every day in the year satisfactory service is to be obtained. Installation suggestions are furnished with each system.

Engineering Advice

Our engineering department will promptly advise and cordially co-operate with anyone contemplating the installation or use of fire alarm apparatus.

Hospital Signaling Systems and Equipment

Hospital signaling systems are an absolute necessity in every modern hospital.

Nurses' Calling Systems

Nurses' calling systems may be of either one of the following 4 types:

Locking-Button Type in which the locking push button, suspended from a flexible, rubber-covered cord contains all the mechanism to actuate the audible and visible signals and to reset these when call has been answered.

Locking-Magnetic Switch Type in which the contacts of the non-locking push button at the end of a flexible, rubber-covered cord actuate a magnetic switch, protected by a steel case in the wall, the switch operating both audible and visible signals; this locking-magnetic switch type may be used on 110-volt circuits, either a.c. or d.c., or on low-voltage circuits if preferred.

Pull-Cord-Switch Type consisting of special toggle-type switch installed in the wall and operated by a pull-cord. This system is used in hospitals where low initial cost is a deciding factor; the operation of the pull-cord switch requires more effort on the part of the patient, and is sometimes not favored because of this.

Bedside-Service-Phone Type permitting direct communication between patient and nurse by means of loudspeaking telephone thus providing greater convenience, and quickest service to patient.

Nurses' and Maids' Location Systems

These systems indicate the location of nurses and maids in private rooms by an illuminated plug inserted in a receptacle at the door when entering. Upon leaving the room this plug is removed.

Ambulance and Entrance Signaling Systems

Consist chiefly of the necessary push button, located at doors leading out of the building and a lamp-annunciator having a lamp signal for each location with buzzer as audible signal. Useful for night service.

Nurses' Home-Calling Systems

These systems provide communication between office and the nurses' and attendants' rooms at their homes. Two types of systems may be used, viz.:

Return-Call Annunciator Type

Intercommunicating Telephone Type

In the return-call annunciator systems, nurses' or attendants' rooms are provided with a combination buzzer and push button-station while at building office, a combination annunciator and push button board is installed. In this way the office may call the nurse and the nurse may answer the call by operating the corresponding push buttons. Room stations may be provided with indicating drops which in nurses' absence remains visible until reset, indicating that a call has been made.

In the telephone call system the combination annunciator and push button board is provided with an operator's telephone and the room stations are replaced by telephones. The room telephone may be provided with indicating drop for the same purpose as stated above.

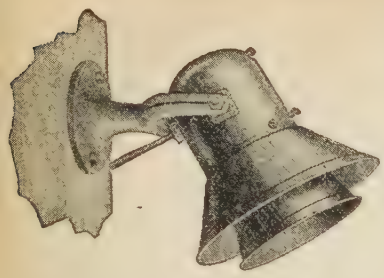
Hospital signaling equipment is approved by Underwriters' Laboratories as well as by the U. S. Government for Veterans' Hospitals, etc.

Engineering Advice

Our engineering department—specialists in this particular field of signaling—will gladly co-operate with architects, engineers, hospital superintendents, etc., in charge of operation to lay out systems and make recommendations.

There is no charge for this service.

Type A Federal Sirens



This outdoor Type A Siren takes the place of bells, gongs, whistles, etc., wherever electricity is available. There are no gears or vibrating parts. This siren with double horn gives increased efficiency, greater volume, and pleasing tone.

Length over all, 14 inches; diameter of horn, 10 inches; diameter of body, 5¾ inches.

Weight, packed in carton, 17 pounds.

Price, Type A, with Universal Motor, ⅓ H.P., A.C. or D.C., 6 to 250 Volts ..... each **$40.00**

Price, Brass, Copper or Porcelain Enamel Finish, 6 to 250 Volts ..... each **45.00**

Federal Vertical Electric Sirens

Greater tone volume per horsepower is obtained by the improved vertical design.

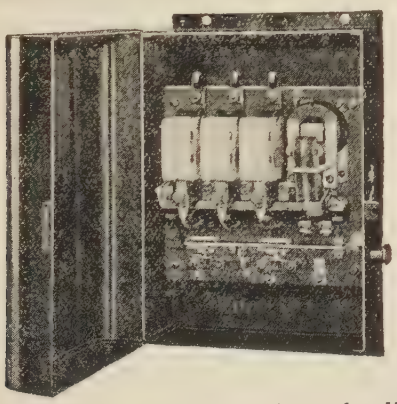
This design also assures full weather protection at all times.

Furnished in sizes 2 to 7½ horsepower according to the size of town.

Full details on vertical sirens for general alarm as well as fast code will be sent upon request.

No.	Each	Motor H.P.	Volts	Current	Cycles	Phase
2	$195.00	2	110–220	Univ. D.C.-A.C.	Any	.....
3	295.00	3	220–440	A.C.	60	2 or 3
3	315.00	3	220	A.C.	60	Single
5	360.00	5	220–440	A.C.	60	2 or 3
5	395.00	5	220	A.C.	60	Single
7	400.00	7½	220–440	A.C.	60	2 or 3

Federal Remote Control Switches



Permits operation of sirens from distant localities. One push button is included.

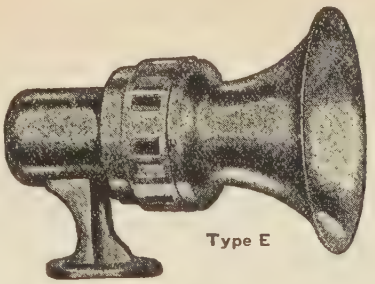
Remote Control for Any 2-H.P. Siren ..... each **$20.00**

Remote Control with Thermal Cut-Out Relays for Any 3-H.P. Siren ..... each **30.00**

Remote Control with Thermal Cut-Out Relays for 5 or 7½-H.P. Sirens ..... each **40.00**

Federal Apparatus Type Sirens

6 or 12 Volts D.C.



Type E

For every type of emergency vehicle, fire apparatus, etc.

With G-E motor.

All types finished in chromium plate except No. 8 which is finished in black Duco.

Type E is furnished with either standard, bar or dash bracket, switch and cable.

No. C-5, Coaster Siren ..... each **$67.50**

No. C-5, Coaster Siren with Electric Brake ..... each **80.00**

Type E, with Flat or Regular Projector ..... each **40.00**

No. 10, with Long or Short Projector ..... each **30.00**

No. 8, with Short Projector ..... each **25.00**

Edwards Horns and Howlers

Schedule T

No. 311

No. 311, for Indoor Use

No. 311 is a powerful signal for all indoor uses, in schools, mills, etc. Ideal in noisy locations as dismissal signal or emergency and fire signal.

Its appearance gives it an advantage in schools and fine buildings.

Equipped with a back plate, which mounts directly on wall, 4-inch square box, standard switch box, any outlet box with single gang switch cover, or any single gang condulet or Wiremold Type fitting. Wires are connected to this plate, and the horn easily hung at any later time without inconvenient connections, screws, etc. Approximately 5½ inches high, 5½ inches wide and 3 inches deep.

No.	311
12–30 Volts A.C. ..... each	$10.00
110 Volts A.C. ..... each	11.24

Nos. 312 and 313

No. 312 with Single Projector

No. 312 has same mechanism as No. 311 but equipped with projector for weather protection.

Drilled top, bottom or both for ½-inch conduit.

Approximately 6 inches high, 11¾ inches long. No. 311 is the same as No. 312 except it has a double projector.

No.	312	313
12–30 Volts A.C. ..... each	$15.00	$18.00
110 Volts A.C. ..... each	15.00	18.00

Approved Mercoid-Triplex Terminal Blocks

With two No. 8-32 steel inserts molded in bottom projecting 3/16 inch to provide means for fastening with nuts to panel or housing.

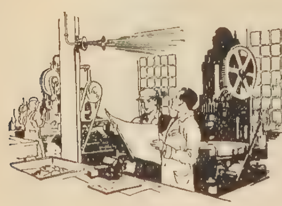
Length, 2½ inches; height, 1⅛ inches; depth, 1 inch.

Four copper bus connectors fastened to molded block and separated by 7/16-inch high molded barriers—8 brass screws No. 8-32 furnished to bind wires to connectors.

Each ..... $.75

Benjamin Industrial Signals

For Calls and Warnings in Factories, Yards, Warehouses, Etc.



In Use in a Machine Shop

In the routine of business, getting men when needed at the office or telephone, is frequently difficult.

A well-installed calling system with the right signals in the line, however, makes it possible to reach any executive at once and without disturbance or loss of time to employees.

Benjamin Industrial Howlers have a peculiar pitch and penetrating tone which makes them most effective and satisfactory signals.

They are ruggedly made and perfectly assembled so that daily performance may be expected for years; their maintenance is less than other forms of signals.

Benjamin Howlers are made for either indoor or outdoor use on direct current or alternating current circuits.

These howlers are satisfactory for use as factory superintendent's and foreman's calls; tell-tale or warning, for water tank levels, steam or gas pressures, sprinkler systems, etc.; burglar alarms; traffic warnings for street crossings; draw bridge signals; in mines, municipal fire stations; at railroad crossings; for signaling the opening and closing hours of labor.

Direct Current Industrial Howlers
For Multiple Circuits

These howlers may be employed successfully on circuits as high as 250 volts.

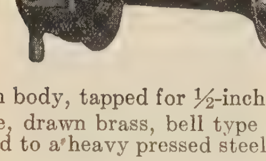
When six or eight direct current howlers are to be used on one circuit, not less than 32 volts should be used.

Sounding mechanism, vibrator type, has silver make-and-break contact points. An especially constructed condenser across contact points prevents arcing.

Vibrator springs of the best grade spring material are mounted independently of the armature.

Self-locking adjusting screw, reached through projector, regulates tone volume and pitch of note.

No. 8326-H Heavy Duty Weatherproof Howlers



Has cast iron body, tapped for ½-inch pipe connection.

The one-piece, drawn brass, bell type sound projector is rigidly attached to a heavy pressed steel cover.

A gasket between cover and body makes the signal weatherproof.

Finished in baked black enamel.

Cat. No.	Type of Projector	Connection	Voltage	Weight Pounds	Price Each
8326-H	Brass Bell	½-in. Conduit	*	5¾	$15.00
8358-A	14-in. Conical	½-in. Conduit	*	6½	16.25

*Standard voltage is 110 volts, direct current, but any voltage from 6 to 250 direct current, inclusive, may be specified at an advance of 50 cents.

Specify voltage when ordering.

Benjamin Industrial Signals

No. 8326-A Heavy Duty Non-Weatherproof Howlers

Has pressed steel body with approved insulated side entrance for open wiring. The one-piece, drawn brass, bell type sound projector is rigidly attached to a heavy pressed steel cover which also carries the mounting bracket. Wire connections are easily accessible by loosening two screws and removing back. Finished in baked black enamel.

Cat. No.	Type of Projector	Connection	Voltage	Wt. Lbs.	Price Each
8326-A	Brass Bell	Open Wiring	*	2¼	$12.50

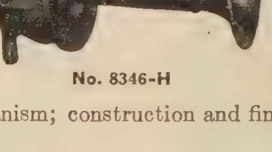
*Standard voltage is 110 volts d.c., but any voltage from 6 to 250 d.c., inclusive, may be specified at an advance of 50 cents. Specify voltage when ordering.

Alternating Current Industrial Howlers
For Series or Multiple Operation

These howlers may be operated on either multiple or series circuits and will work well even in connection with vibrator or single stroke gongs, etc.

When used in series with other electrical devices special windings are furnished which allow passage of sufficient current to operate the other devices on same line. A 10 per cent variation in voltage will not affect the satisfactory working of the howler. Weatherproof types are recommended when signals are to be used outdoors. Sounding mechanism is of the vibrator type. The vibrations are the result of the alternating current cycles and no make-and-break contacts are required. No adjustments are needed.

Heavy Duty Weatherproof Howlers



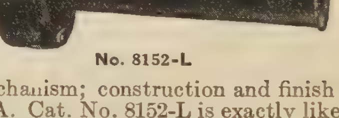
No. 8346-H

Has a.c. mechanism; construction and finish same as for Cat. No. 8326-H.

Cat. No.	Type of Projector	Connection	Voltage	Wt. Lbs.	Price Each
8346-H	Brass Bell	½-In. Conduit	**	4¾	$12.50
8357-A	14-In. Conical	½-In. Conduit	**	5¼	13.75

**Standard winding is for 60 cycles, 110 volts a.c., but any voltage from 6 to 250 a.c., inclusive, may be specified at an advance of 50 cents. Specify voltage and frequency when ordering.

Factory Non-Weatherproof Howlers



No. 8152-L

Has a.c. mechanism; construction and finish same as for Cat. No. 8326-A. Cat. No. 8152-L is exactly like No. 8355-A except that it is equipped with a 9-inch conical sound projector which tends to confine the volume of tone in one direction.

Cat. No.	Type of Projector	Connection	Voltage	Wt. Lbs.	Price Each
8355-A	Brass Bell	Open Wiring	**	2¼	$10.00
8152-L	9-In. Conical	Open Wiring	**	2	8.75

**Standard winding is for 60 cycles, 110 volts a.c., but any voltage from 6 to 250 a.c., inclusive, may be specified at an advance of 50 cents. Specify voltage and frequency when ordering.

No. 8152-S Mine Type Weatherproof Howlers

Has pressed steel body and front cover with mounting bracket attached to front cover and a one-piece, drawn brass bell type sound projector. Electrical connections are made to insulated wire leads entering front cover. Made weatherproof by gasket and by sealing wire entrance. Finished in baked black enamel.

Cat. No.	Type of Projector	Connection	Voltage	Wt. Lbs.	Price Each
8152-S	Brass Bell	Open Wiring	**	2¼	$12.50

**Standard winding is for 60 cycles, 110 volts a.c., but any voltage from 6 to 250 a.c., inclusive, may be specified at an advance of 50 cents. Specify voltage and frequency when ordering.

No. 8161 Benjamin Kode-Kalls

Operated mechanically by a precision-built clock work. For code calling systems of industrial plants, offices, etc. To operate, set dials at code numbers desired and push down on plunger; Kode-Kall then automatically repeats signal 3 times.

Can be used on any kind of signaling system—operated from batteries, lighting circuit or current of any voltage. Any type of signaling device can be used in circuit. Electrical contacts are rated at 100 watts at 110 volts.

Office green crackle lacquer finish, polished metal trim. Has rubber foot pads. Complete with cord and connector.

No. **8161**, Wt. 9 Lbs.....each **$40.00**

Benjamin Single Stroke Bells and Chimes

National Electrical Code Standard

For Series or Multiple Operation

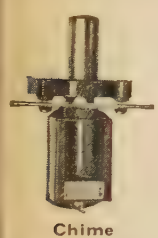
Bells are for code calling in large offices, factories, schools, commercial establishments, etc. Ideal for coded fire alarms or other coded warning signal systems.

Bell

Mechanism is of the solenoid type with only one moving part—the plunger—which responds instantly when coil is energized.

Tone volume is adjustable. Soft, medium or loud tones may be obtained by turning set screw at bottom of casing, which regulates plunger stroke.

Installation is simplified by special mounting plate which provides a means of direct attachment to Gem Type Outlet Boxes or to any switch or outlet box cover having mounting holes space on 3 9/32-inch centers. In installing, mounting plate is first attached to outlet box or cover by 2 screws. Wires are then brought through large center hole in plate, and looped around binding screws. After wiring, device is attached by 2 screws threading into special mounting plate.



Chime

Plunger is of magnetic iron, with a bakelite striker and moves freely in a bakelite tube. Magnet coil is layer wound, impregnated and not affected by moisture. The chimes are identical in construction to the bells except that a metal chime bar with a wood resonating chamber is provided in place of a gong. All housings are of cast iron; housings, bells and resonating chamber of chimes are finished in black.

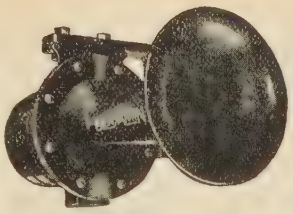
Cat. No.	Each	Description	Voltage	Wt. Lbs.
8110	$9.70	3-In. Diam. Bell	110 Volts, 60 Cy. A.C..	3
8111	9.70	3-In. Diam. Bell	110 Volts, D.C.....	3
8115	15.75	6-In. Diam. Bell	110 Volts, 60 Cy. A.C..	4
8116	15.75	6-In. Diam. Bell	110 Volts, D.C.....	4
8117	19.75	8-In. Diam. Bell	110 Volts, 60 Cy. A.C..	6
8118	19.75	8-In. Diam. Bell	110 Volts, D.C.....	6
8120	18.00	Chime.....	110 Volts, 60 Cy. A.C..	5
8121	18.00	Chime.....	110 Volts, D.C.....	5

Standard voltages are listed above.

Special voltages from 6 to 48 volts, a.c. or d.c. may be specified at a reduction of $2.00 in list price. For voltages over 125 volts, a.c. or d.c., add $2.00 to list price. Special voltages and frequencies must be specified when ordering.

Benjamin Motor Driven Signals

For Multiple Circuits



A weatherproof signal of unusual tone and penetration. Used indoors or out where service requirements are exacting. For use in steel mills, railroad shops, foundries and all locations where noise is excessive.

Pitch of signal is correct for cutting through conflicting noise. Suited for coding as there is no lag or coasting of motor to blur the coded signal.

Signal has heavy cast body, weatherproof rubber gaskets, drop-forged, heat-treated alloy steel ratchet and diaphragm anvil, phosphor bronze armature bearings and automatic wick-feed lubrication. Motor is series wound for starting power and has correct r.p.m. to produce penetrating tone. A set screw at rear of housing controls volume and pitch.

Standard voltage: 110 volts, 60 cycles a.c. or 110 volts, d.c. Special voltages up to 250 volts d.c. and 240 volts a.c. and frequencies from 25 to 50 cycles available at advances over prices. Power consumption, 55 watts.

Finished in baked black enamel. Red enamel furnished at an advance of $1.25.

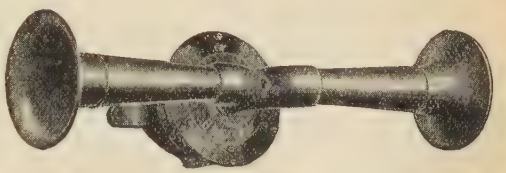
The double projector type motor-driven signal is used where sound is to be projected in opposing directions from a central location.

Conduit connection, ½ inch.

Net weight, 14¾ pounds.

Cat. No.	Projector	Voltage	Price Each
8175	Single Cast.....	110 A.C.	$35.00
8176	Single Cast.....	110 D.C.	35.00
8180	Double Bell.....	110 A.C.	38.75
8181	Double Bell.....	110 D.C.	38.75

Weatherproof Double Projector Howlers



No. 8788

The Projector Howler offers an effective and economical means of projecting sound from a central point up and down a passageway or platform.

This howler has cast iron body, with 2 mounting lugs and is tapped at side for ½-inch pipe connection. Two drawn brass, bell type sound projectors are attached to pressed steel front cover.

The sounding mechanism for the Double Projector Howler is of the vibrator type, furnished for d.c. or a.c. circuits, and is standard Benjamin Industrial Howler construction. All joints in case are gasketed to make mechanism weatherproof. Finish is baked black enamel. Red enamel finish will be furnished at $1.00 advance in list price.

Cat. No.	Connection Inches	Voltage	Wt., Lbs. Each	Price Each
8788	½ Conduit	†D.C.	8	$18.75
8790	½ Conduit	*A.C.	7	16.25

*110 volts, 60 cycles is standard on Benjamin a.c. horns. However, any voltage from 6 to 250, and any frequency from 25 to 60 cycles, may be specified at an advance of 50 cents list. Voltages and frequencies must be specified when ordering.

†110 volts is standard for all Benjamin d.c. horns. However, any voltage from 6 to 250 may be specified at an advance of 50 cents list. Specify voltage when ordering.

Benjamin Weatherproof Fire Alarm Howlers

No. 8360

Specially built for use on fire alarm systems operating under stringent regulations. The Industrial Commission of the State Department of Labor, New York City, has approved them for use with standard fire alarm boards.

In series, without condenser, eight 14-volt or fourteen 8-volt howlers may be used, but where fourteen 14-volt howlers are used a condenser must be supplied on the panel board. The 110-volt howlers may be used for open circuit work where a time limit fuse or switch is inserted in the circuit. The use of 8-volt and 14-volt signals on one circuit is permitted. D.C. howlers are for use on multiple circuits only. The sounding mechanism for Benjamin Fire Alarm Howlers is of the vibrator type. These signals have cast iron body tapped for ½-inch pipe connection. A one-piece, drawn brass, bell type sound projector is rigidly attached to a pressed steel front cover. Signal is made weatherproof by gasket. Finished in red enamel.

Cat. No.	Type of Projector	Connection	Std. Voltage	Wt. Lbs.	Price Each
8360	Brass Bell	½-In. Conduit	*110 D.C.	5¾	**$16.00**
8864	Brass Bell	½-In. Conduit	8 A.C.	4¾	**13.50**
8865	Brass Bell	½-In. Conduit	14 A.C.	4¾	**13.50**
8866	Brass Bell	½-In. Conduit	*110 A.C.	4¾	**13.50**

*Standard voltage is 110 volts, D.C. or A.C., but any voltage from 6 to 250 inclusive, D.C. or A.C., may be specified at an advance of 50 cents. Specify voltage when ordering.

Benjamin A.C. Industrial Buzzers

The sounding mechanism of these buzzers is of the vibrator type. The vibrations are the result of the alternating current cycles and no make-and-break contacts are used. These buzzers will operate indefinitely without adjustment or attention, under all commercial conditions on either multiple or series circuits. Mine buzzer No. 8299-M may be used outdoors as well as indoors.

No. 8299-M

Heavy Duty Mine Buzzers

Open wiring type No. 8299-A has heavy stamped steel enameled case and 8-inch wire leads sealed in for outside connection.

Conduit type No. 8299-M has cast brass cover and is tapped for ½-inch pipe connection.

Finish, baked black enamel.

Cat. No.	Type Body	Connection	Std. Voltage	Wt. Lbs.	Price Each
8299-A	Stamped	Open Wiring	†110 A.C.	1¾	**$7.50**
8299-M	Cast	½-In. Conduit	†110 A.C.	1¾	**11.25**

No. 8297-A Office and Factory Buzzers

One-piece pressed steel front cover has side opening with approved insulated wire entrance for open wiring.

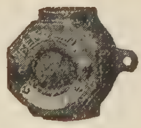
Back plate is pressed steel, with mounting brackets top and bottom. This is an effective and reliable signal for offices, stock rooms, shipping rooms, etc., where a weatherproof signal is not necessary. Finished in black enamel.

Cat. No.	Type Body	Connection	Std. Voltage	Wt. Lbs.	Price Each
8297-A	Stamped	Open Wiring	†110 A.C.	1¾	**$5.75**

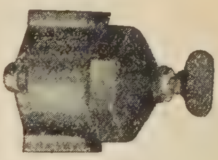
†May be wound for voltages as high as 250 volts a.c. when specified, at no advance in price.

Benjamin Heavy Duty High Voltage Push Buttons

Rating: 5 Amperes, 125 Volts



No. 8493



No. 8734

For use with industrial signals.

Quick, positive make-and-break mechanism is mounted on base of high heat molded insulating material.

Brass casing with mounting lugs. Casing will be tapped for ½ or ¾-inch pipe, 1 or 2-way, if specified, without extra charge.

Finished in dead black.

Non-Locking—Single Button

Cat. No.	Description	Weight Pounds	Price Each
8493	Open Circuit Type	1⅛	**$3.60**
8874	Closed Circuit Type	1⅛	**3.60**

Non-Locking—2-Gang Button

Cat. No.	Description	Weight Pounds	Price Each
8495	Open Circuit Both Buttons	1⅔	**$5.00**
8884	Open Circuit One Button, Closed Circuit One Button	1⅔	**5.00**

Locking Type—Watertight

Cat. No.	Description	Weight Pounds	Price Each
8733	Closed Circuit Type	1⅛	**$4.00**
8734	Open Circuit Type	1⅛	**4.00**

When ordering, specify size and number of outlets required.

Benjamin Master Relays for Signal Systems

For use with Benjamin Kode-Kall in operating the more extensive type of signaling installations where connected load is in excess of the 100-watt rating of the Kode-Kall, or where it is not desired to have the Kode-Kall wired into the high voltage signal circuit.

Contacts of relay have a non-inductive rating of 110 volts of 30 amperes a.c. and 6 amperes d.c.; at 200 volts, 20 amperes a.c. and 3 amperes d.c.

Coil is rated at approximately 7 watts and operates at plus or minus 15% of rated voltages.

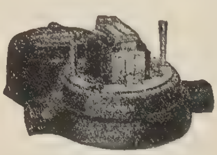
Relay is available in following voltages: 110 volts a.c. 60 cycles; 18 volts a.c. 60 cycles. However, the 110-volt a.c. relay operates at 15 to 30 volts d.c. and the 18-volt a.c. relay operates at from 4 to 6 volts d.c.

Relay is front connected and is mounted on a base of high insulating molded composition. Relay must be mounted in a vertical position.

Box supplied with No. 8336 is 6x6x4 inches in size and has ½-inch knockouts; finished in black japan.

No. **8335**, Complete less Box, Wt. 3½ Lbs......each **$12.00**
No. **8336**, With Steel Knock-Out Box, Wt. 5 Lbs..each **15.50**

Telecode Relays



No. 8314

This is a very sensitive, efficient and quick-acting circuit-closing unit standard with open-circuit contacts.

It can be had with back connections for panel mounting, with weatherproof conduit-fitting mounting or with 6x6-inch pressed steel box with knockouts.

No. **8313**, with Panel Mounting................each **$12.00**
No. **8314**, with ½-Inch Conduit Mounting......each **14.50**
No. **8315**, with 6x6-Inch Steel Box..............each **12.00**

Klaxon Industrial Horns

Electric motor-driven devices for operation on higher voltages. Effective in sounding time signals, fire or special hazard alarms or as warnings on derricks, etc.

For operation on 5 to 250 volts d.c. and on 10 to 460 volts a.c. Weatherproof housings are fitted with brackets for wall mounting and are tapped for conduit.

Types WS, W and WL with fire red lacquer finish; also available with Navy standard finish (baked black enamel over solid brass and copper plate) at $3.00 extra.

In ordering give type desired, voltage of current supply and if a.c. or d.c.; advise cycle frequency if a.c.

Type WS

Has a short projector, producing a harsh, piercing note which scatters in all directions. Suited for indoor use under severe noise conditions.

Length, 7½ inches; height, 11¾ inches. Shipping weight, 24 pounds.

Type WS....................each **$30.00**

Type W

With a ram's horn projector which directs its deep tone downward. Ideal for overhead or outdoor use.

Length, 12¼ inches; height, 11¾ inches. Shipping weight, 29 pounds.

Type W.............each **$30.00**

Type WL

With a long projector. Deep penetrating note of great power recommends this horn where long distances are to be covered or where note is to be directed toward a given point.

Length, 14¼ inches; height, 13 inches. Shipping weight, 29 pounds.

Type WL.......each **$30.00**

Type 1278-A

For use only on 110-volt 60-cycle current.

Type 1281-A

For use only on 110 d. c. current.

Nos. 1278-A and 1281-A are small vibrator type horns for inside or protected outdoor use.

Length, 5⅝ in.; height, 6½ in. including mounting bracket. Ship. weight, 5 pounds.

Red Lacquer Finish............each **$5.00**

Klaxon 20 Horns for Marine Use

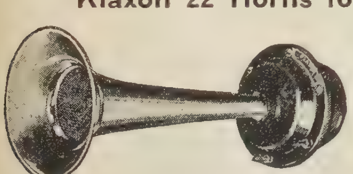
A detachable swivel mounting bracket and slip terminals make horn easily removable. Has weather-resisting Navy standard finish (baked black enamel over solid brass and copper plate).

Length, 11⅜ inches; height without deck bracket, 10⅝ inches. Shipping weight, 15 pounds.

Type **530**, 6 Volts.each **$28.00**

Type **542**, 6 Volts, with Attached Side Mounting Bracket..................................each **25.00**

Klaxon 22 Horns for Marine Use



A high-frequency automotive type horn. Projector, screen and back shell are polished solid brass, collar is rustproofed; black enamel finish.

Length, 14¾ inches. Weight, 6¾ pounds.

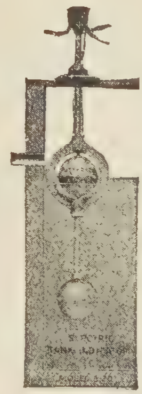
Type **1141-A**, 6 Volts..........................each **$15.00**

Type **1142-A**, 12 Volts.........................each **15.00**

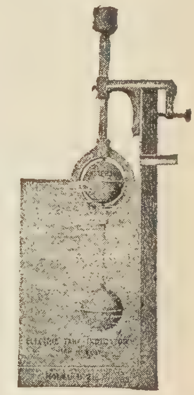
Patterson Electric Tank Indicators

For Operation on Low-Voltage Transformer or Battery Circuits

Schedule T



No. A-20

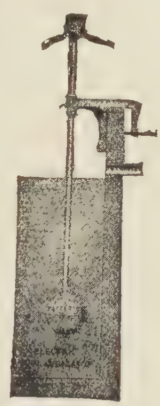


No. B-21

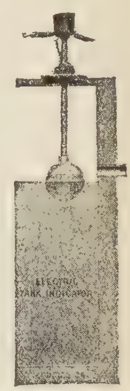
Indicator gives a positive electrical alarm either in connection with a signal-gong or an annunciator, showing when contents of tank have reached a maximum or minimum level, or both.

Has self-cleaning contacts, brass-bushed bearings for vertical movements of rods in pipe. Will not fail when exposed to severe weather conditions; not affected by steam or vapor. All contacts are housed.

Standard package, 1.



No. D-23



No. E-24

Description	For Closed Tank Cat. No.	Each	For Open Tank Cat. No.	Each
*High and Low Water.........	A-20	$30.00	B-21	$30.00
Low Water (with 24″ I.P. Stem)	C-22	18.00	D-23	18.00
High Water (with 20″ I.P. Stem)	E-24	18.00	F-25	18.00

Add for Conduit-Connection Pattern for Pipe or Armored Conductor..........................each **$6.00**

*Furnished regularly allowing 12 inches between upper and lower balls.

If greater distance between base of flange and ball is required, extra stem will be furnished at the following prices:

		For A-20 and B-21	For C-22, D-23 E-24 and F-25
Extra Stem up to **8** Feet........	per foot	$1.44	$1.00
Extra Stem up to **9** to **16** Feet...	per foot	2.40	1.80
Extra Stem up to **17** to **20** Feet..	per foot	3.00	2.40

Edwards Flushcall Signaling Devices

No. 660
No. 760
No. 1060

Flushcall signaling devices fit standard single gang boxes and take standard toggle switch plates. Can be ganged together with 110-volt receptacles, etc., in standard gang box and finished with standard plate.

For a.c. only. No adjustments needed. The uncertainty as to proper resistance, voltage, etc., for various uses has been eliminated.

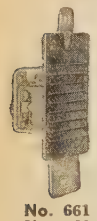
For Operation on 8 to 12 Volts, A.C., 60 Cycles

These devices are suitable for operation of not more than two in multiple on Edwards No. 666 Powacall or No. 86 transformer; three in multiple on No. 88, 50-watt transformer; and four on No. 90, 100-watt transformer. Except No. 663 Melocall which is suitable for single use only.

No. 663
No. 763

Cat. No.	Each	Description	Std. Pkg.
660	$1.02	Ringcall, Replacing Bell	20
661	.96	Buzacall, Replacing Buzzer	20
662	1.44	Tucall, Replacing Combined Bell and Buzzer	20
663	1.20	Melocall, the Third Call	20
668	1.14	Varicall, Adjustable Buzzer, Can be Varied from Loud Low Tone to Soft High Tone	1

No. 666 has 110-volt, 60 cycles primary; 8-volt secondary standard. Special voltages, 220 volts primary or other than 60 cycles, add to list 20 per cent.



No. 661
No. 761
No. 1060
No. 668
No. 768

666	1.12	Powacall, Replacing Bell Ringer	20
664	.25	Togelpush, for Low Voltages A.C. or D.C.	20

For Multiple Operation or 24-Volt, A.C. Use

Suitable for operation of 9 in. multiple on No. 88 50-watt transformer; 15 in multiple on No. 90 100-watt transformer; 36 in multiple on No. 94 250-watt transformer; 72 in multiple on No. 99 500-watt transformer.

No. 662
No. 762

760	$1.32	Ringcall, Replacing Bell	1
761	1.26	Buzacall, Replacing Buzzer	1
762	1.92	Tucall, Replacing Combined Bell and Buzzer	1

No. 763 Melocall is suitable for operation of 3 in multiple on No. 88 50-watt transformer; 6 in multiple on No. 90 100-watt transformer; 14 in multiple on No. 94 250-watt transformer; and 28 in multiple on No. 99 500-watt transformer.

No. 664

763	$1.62	Melocall, the Third Call	1

No. 768 is for operation of 12 in multiple on No. 88 50-watt transformer; 20 in multiple on No. 90 100-watt transformer, 48 in multiple on No. 94 250-watt transformer; and 96 on No. 99 500-watt transformer.

No. 666

768	$1.44	Varicall, Adjustable Buzzer, Can be Varied from Loud Low Tone to Soft High Tone	1

For Operation on 110-Volt, A.C.

1060	$6.00	Ringcall, Replacing Bell	1
1061	5.85	Buzacall, Replacing Buzzer	1

Standard barrier boxes, allowing easy inexpensive combination of Flushcall and 110-volt devices, are made by all leading box manufacturers.

Extension Signals to an Annunciette

No. 696 Ringcall for ring extension with Edwards No. 88 50-watt (16-volt) transformer for system; and No. 668 Varicall for buzz extension with Edwards No. 666 Powacall for system. Two Varicall extensions in multiple on Edwards No. 88, 50-watt (8-volt) transformer.

No. **696**, Ringcall.....each **$1.32**
No. **668**, Varicall.....each **1.14**

Edwards Nubels

No. 735, Nubel

No. 735 Nubel

The No. 735 Nubel is a double magnet bell that operates perfectly on battery or transformer. It has phosphor bronze springs, silver contacts and new code binding posts. Grey enamel finish.

Standard package, 100; shipping weight, 45 pounds.

No. **735**.....each **$.58**

No. 736 Buzzer

The No. 736 Buzzer is of the same construction as the No. 735 Nubel.

Standard package, 100; shipping weight, 32 pounds.

No. **736**.....each **$.55**

No. 737 Combel

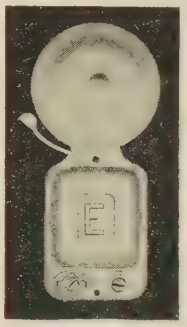
The No. 737 Edwards Combel is a double magnet bell and double magnet buzzer on one frame with the complete mechanism except the binding posts under a neat cover. For the apartment and flat. Has grey enamel finish that may be repainted. Gives excellent operation on battery or transformer.

Standard package, 50; shipping weight, 56 pounds.

No. **737**.....each **$1.13**

The E Line Bells and Buzzers

Double magnet bells, buzzers and combinations of the non-adjustable type. Have phosphor bronze springs, silver contacts and new code binding post. Cadimun finish.



No. 740

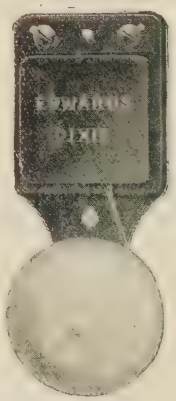
Schedule E

Cat. No.	Per 100	Description	Std. Pkg.
740	$57.50	2½-Inch Bell	100
741	55.00	Buzzer	100
742	112.50	Combination	50
743	67.50	3-Inch Bell	25
744	92.50	4-Inch Bell	25
745	135.00	Cowbell	*25
746	135.00	Sleighbell	*25

*Can be assorted.

Edwards Dixie and Cadet Bells

Schedule E



Dixie Bell

Hammer rod, ball and armature are all 1 piece. Rod is swaged to prevent bending in operation. Hammer ball is under the gong to prevent disarrangement. The armature is pivoted at the nearest point to the cover where there is practically no side motion.

Dixie Buzzer

Class C bell is non-adjustable; resistance, 2 ohms only.

Class B bell is adjustable; resistance, 2 ohms only.

Finish, black enamel, nickel trimmings.

Dixie, Class C Bell—2 Ohms

Cat. No.	Size In.	Std. Pkg.	Price Each	Cat. No.	Size In	Std. Pkg.	Price Each
720	2½	100	$.92	*725	...	100	$.89

Cadet, Class B Bell—2 Ohms

710	2½	100	$1.04	*715	...	100	$1.02
712	3	100	1.18	**	...	50	1.83
714	4	50	1.53	...	...	...	....

*Buzzer. **Fancy Gong.

No. 13 Lungen Bells

Standard—8-10 Volts A.C., 6-8 Volts D.C.

Schedule E

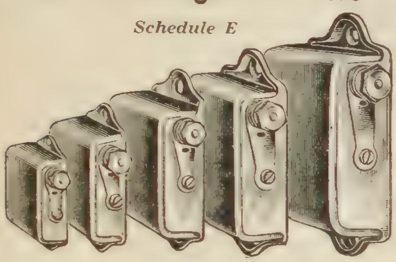
Made of brass heavily nickeled; ribbed edges, spring cover. Cast base, screw and locknut adjustment. Price for special finish upon request.

Standard package made up of 10 assorted sizes.

Size In.	Each	Size In.	Each
1	$2.40	3	$2.40
1¾	2.20	4	3.20
2¼	2.30	..	.....

No. 15 Lungen Buzzers

Schedule E



0 1 2 3 4

Cover and base sheet steel; pivoted armature; ribbed edge spring cover. All nickel finish.

Standard package, 10, assorted.

Size No........	0	1	2	3	4
Dimen......in.	1⅝x1⅛	2⅛x1 5/16	2 9/16x1¾	3x2	3½x2¼
No. 15....each	$1.90	1.80	1.90	2.00	2.70

No. 16 Edwards Flush Buzzers

Battery or Transformer Operation

Schedule T

Used in offices, hospitals, residences, where the appearance of the usual surface type buzzer is objectionable. Buzzer is mounted on a sub-plate which fits any standard switch box. Standard switch plate with perforations to emit sound is furnished to cover buzzer and sub-plate.

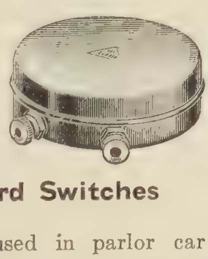
Standard finish, brush brass; nickel at no extra charge. Special finishes, upon application.

Weight, metal plate, ¾ pound; bakelite plate, 9 ounces.

No. **16**, Metal Plate.......each **$3.00**
No. **16**, Bakelite Plate....each **3.30**

No. 750 Bronx Watchcase Buzzers

Schedule E



A brass case, heavily nickel plated; phosphor-bronze springs, silver-contacts.

Cat. No.	Each	Height Inches	Diam. Inches	Std. Pkg.
750	**$1.80**	⅝	1¾	10

No. 5006 Graybar Pull Cord Switches

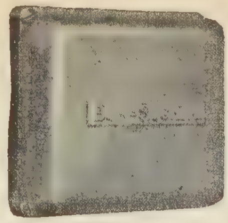
Generally used in parlor car coaches.

Operates bus signal buzzers; also used as a stop light switch.

Overall block dimensions, 1⅜x2 3/16x1 3/32 inches deep.

Prices and specifications upon application.

No. 5003 Graybar Bus Signal Buzzers



Graybar Bus Signal Buzzers are of the totally enclosed type. A steel cover mounted over the mechanism, houses the unit and protects it from dirt and the weather.

All buzzers are thoroughly insulated and tested at a high voltage breakdown. The magnets are wound with enameled wire, assuring protection from moisture and short circuited turns.

For battery operation, either 6 or 12 volts. In ordering, state voltage required. The resistance of the buzzers is made high to utilize a minimum amount of current when operating. For other voltages, prices upon application.

Overall dimensions, 3 13/16x3 13/16x1⅝ inches

Resistance, 15 ohms; voltage, 12. Dry or storage battery.

Prices and specifications upon application.

No. 5000 Graybar Combination Vibrating and Single Stroke Bells

This bell makes it possible to combine 2 signals in one bell. Adaptable for double deck buses, the vibrating action being used for passenger's signal while single stroke action is for conductor's signal.

Guard extends partially over the gong. Supplied with 4-inch diameter gongs; stainless steel covers finished in black.

Over all dimensions, 8¾x4 inches.

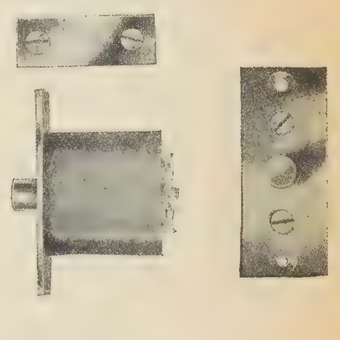
Resistance, 15 ohms; voltage, 6 or 12. Dry or storage battery.

Weight, 2¾ pounds.

Specify voltage when ordering.

Prices and specifications upon application.

No. 5004 Graybar Door Step Light Switches



For operating step lights. Heavy gauge bronze face plate, nickel finish. Plunger head is of stainless steel. Electrical contacts are enclosed in bakelite base.

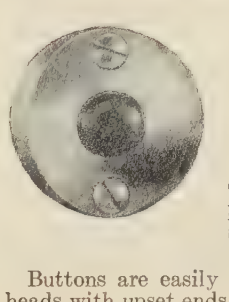
Can be used to make and break circuits carrying as high as 10 amperes.

Dimensions: 2½ inches high; 1 inch wide; 1 11/16 inches deep.

Packed in individual cartons containing switch, mounting screws and bumper plate.

Prices and specifications upon application.

No. 5005 Graybar Bus Signal Push Buttons



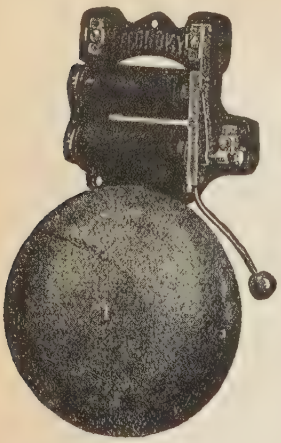
For bus service requirements.

Formed to permit mounting on narrow window posts or installing on moulding. The cover of highly polished nickel finish is fastened to the bakelite base by 2 binding screws.

Mechanism is completely insulated. Contact springs are made of genuine phosphor bronze of the double-break, self-cleaning type, insuring positive action at all times.

Buttons are easily wired as terminal screws have large heads with upset ends to prevent their locking out when connections are looped. Connection permits looping of signalling circuit, eliminating splicing and soldering at each push button station. Overall dimensions, 1½x1 inch.

Prices and specifications upon application.



No. 71 Edwards Economy Skeleton Bells

Schedule E

A fully insulated, loud ringing bell for all ordinary purposes.

The outstanding feature of the Economy is the intensified stroke armature.

Size Inches	Each	Std. Pkg. Assorted
3	$5.55	5
4	6.60	5
6	8.85	5
8	14.35	5
10	21.30	5
12	27.50	5

No. 17 Edwards Economy Bells

Standard Voltage—8-10 Volts A.C., 6-8 Volts D.C.

Schedule E

This is a covered, double magnet bell for low cost burglar alarm and similar work.

It is the adjustable type.

Bakelite insulation.

Finish, black.

Standard package, 5. Can be furnished assorted.

Size.....inches	3	4	6	8	10
No. 17.....each	$5.55	6.60	7.80	11.40	15.00

No. 55 Edwards Bells

Standard Voltage—8-10 Volts A.C., 6-8 Volts D.C.

Schedule E

This single magnet bell is especially designed for low cost burglar alarm and similar work.

It is of the adjustable, non-weatherproof type.

Has black finish with nickel gong.

Standard package, 5. Can be furnished assorted.

Size.....inches	4	6	8
No. 55.....each	$3.15	3.97	6.67

No. 156 Edwards Monitor Bells

Battery or Transformer Operation

Schedule T

An entirely self-contained bell that presents a neat appearance.

The hammer rod moves on a straight line and strikes the inside of the gong. This allows the bell to be made weather, bug and dust proof.

The springs are phosphor bronze, the contacts pure hard-drawn silver. Has a 3-inch gong, nickel, base is finished in black.

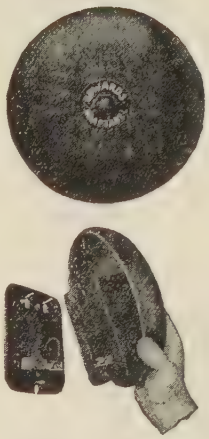
Weight, 1¼ pounds.

Price, No. 156, Vibrating.....each $1.80
Price, No. 156, Single Stroke D.C. Only.....each 2.30

Edwards Vibrating or Single Stroke Adaptabels

For All A.C. and D.C. Voltages

Schedule T



This is a compact bell of the Underdome, Turtle or Monitor Type.

Fits a variety of standard conduit boxes and similar fittings, concealed or surface. Mounting is also simple for non-conduit work.

The gong does not have to be removed for installation—first, mount plate on wall or on switch box, outlet box or any standard type fitting desired; second, connect wires to large convenient binding post; third, hang adaptabel on two strong lugs, then push it home. It snaps solidly into place. A few turns of the screw under the bell locks it in place.

As the electrical connections are made to the mounting plate only, the whole electrical installation can be made, tested and completed before painting and finishing.

The maintenance problem in hard service work, like traffic signals, railroads, etc., is simplified with a few spare adaptabels. Adaptabel is easily detached and a new one attached instead of repairing on the job or the complete electrical installation of a new bell.

The movement is completely enclosed in a cast aluminum housing. Protected against dirt, bugs, etc. When weatherproof is specified, it is protected with gaskets.

The a.c. vibrating mechanism is the polarized, no contact type. There are no coil springs or pivots. No adjustment necessary. Gongs are hot pressed steel, Parkerized to prevent rust.

The d.c. vibrating mechanism is also of the straight line plunger type. Gongs are of hot pressed steel, Parkerized to prevent rust.

All 6 to 12-inch adaptabels mount directly on wall, 4-inch square box, standard switch box or any outlet box with single gang condulet or Wiremold type fitting.

All 3 or 4-inch adaptabels have separable plate for mounting same as above and will also fit 3¼-inch octagon boxes.

In ordering, specify voltage desired.

Vibrating Type

No. 560 for A.C.—No. 561 for D.C.

Size Inches	12-30 Volts A.C. 6-9 Volts D.C. Each	110-130 Volts A.C. or D.C. Each	220-240 Volts A.C. or D.C. Each	Special Voltages or Resistance up to 48 Volts A.C. or D.C. Each
3	$9.30	$11.30	$13.80	$10.60
4	10.30	12.50	15.00	11.60
6	15.00	17.20	19.70	16.80
8	18.00	21.00	23.50	19.80
10	27.50	29.70	32.20	29.80
12	33.00	35.50	38.00	35.30

Single Stroke Type

No. 562 for A.C.—No. 563 for D.C.

Size Inches	10-48 Volts A.C. or D.C. Each	110-130 Volts A.C. or D.C. Each	220-240 Volts A.C. or D.C. Each
4	$10.30	$10.30	$13.50
6	13.80	13.80	14.40
8	15.80	15.80	16.40
10	19.30	19.30	19.90
12	22.50	22.50	23.10

No. 551 Edwards Plunger Type Bells

For All A.C. Voltages

Schedule T

No. 551, Single

A no-contact, polarized bell. For traffic signals, mines, warehouses and all standard signaling purposes.

Binding posts and all parts are completely covered; as hammer rod operates in a straight line, the hole in the cover is but little larger than the rod itself, which makes the bell bug and dust proof. Rustproof gongs are standard equipment, and with the addition of a rubber gasket the bell is weatherproof.

There are no contacts to wear, stick or replace. No pivots, coil springs or points of friction.

No adjustment. The only wearing part is where the hammer strikes the gong and the mechanism automatically adjusts itself to this.

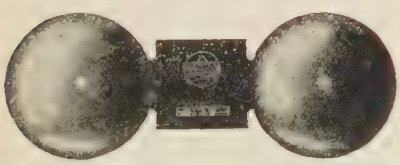
Approved by the National Board of Fire Underwriters.

No. 551 Single Gong Type

Buzzer

Size Inches	12-30 Volts Each	110-130 Volts Each	220-240 Volts Each	Weight Pounds
3	$9.30	$11.30	$13.80	2½
4	10.30	12.50	15.00	3
6	15.00	17.20	19.70	5
8	18.00	21.00	23.50	12
10	27.50	29.70	32.20	14
12	33.00	35.50	38.00	16½
Buzzer	7.70	10.70	13.20	1½

No. 552 Double Gong Type



Size Inches	12-30 Volts Each	110-130 Volts Each	220-240 Volts Each	Weight Pounds
4	$11.30	$13.40	$15.90	4
6	21.90	24.10	26.60	8
8	25.60	28.00	30.50	16
10	30.00	32.80	35.30	19

For weatherproof type, add $1.25.

Conduit attachment, add $1.25 for separable conduit fitting for flush or surface conduit. Furnished at no extra charge on 110–220-volt bells.

No. 551 F.G. Full Grid Type

Schedule T

No. 551 F.G.

Add to Standard bell:

Size Inches	Add Each	Weight Pounds
6	$7.50	2¼
8	8.00	3¼
10	9.00	5½
12	10.50	7

Part Grid, No. 551 P. G., same price.

No. 551Y Yard Type with Protective Hood

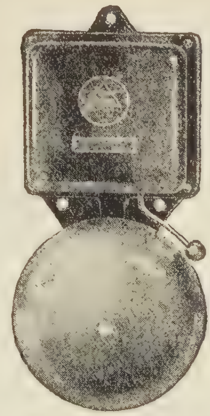
Add to Standard Bell for No. 551Y............each **$25.00**

Special voltages up to 30 volts at no charge.

No. 510 Edwards Clapper Type Bells

For Transformer and 110-Volt A.C. Lighting Circuits

Schedule T



No. 510 Standard

Conduit Type

These bells are designed with laminated magnets and specially constructed armature for efficient operation on transformer where a bell with contacts is desired. The contacts are silver, having a large area and excellent carrying capacity. They are easily replaceable.

Conduit fittings are made so that they may be installed with conduit and bell placed thereon after the wires are pulled through. Fittings are drilled top and bottom for ½-inch conduit unless ¾-inch is specified. A pipe plug is furnished for use when bell is on end of line.

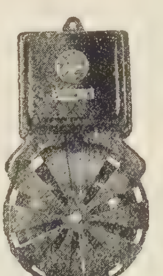
Buzzer

No. 510 Standard

Size Inches	Transformer Volts A.C. Each	110 Volts A.C. Each	Weight Pounds
3	$9.30	$11.30	2
4	10.30	12.50	2¼
6	15.00	17.20	8½
8	18.00	21.00	11½
10	27.50	29.70	12½
12	33.00	35.50	16
Buzzer	7.70	10.70	1¾

Weatherproof type, add $1.25 list.

Conduit attachment, for use on all type bells, add $1.25 list. Furnished at no charge on 110-volt bells.



No. 510 F.G.

No. 510 F.G. Full Grip Type

Schedule T

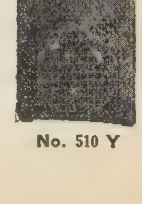
Add to Standard bell:

Size Inches	Add Each	Weight Pounds
3	.....	...
4	$6.50	1
6	7.50	2¼
8	8.00	3
10	9.00	5½
12	10.50	7¾

No. 510Y Yard Type With Protective Hood

Schedule T

Add to Standard Bell for No. 510Y ....each **$25.00**



No. 510 Y

Edwards Plunger Type Recti Bells

For Battery and D.C. Lighting Voltages

Brass hammer rod is so suspended at the armature that easy operation with no side motion is assured. The striking end of the rod is suspended by the case itself.

Springs of phosphor bronze act as demagnetizer between magnet head and armature when stroke has been made.

Contacts are silver.

Iron case, japanned; with felt gasket, oil treated.

Ball metal gong, finished in black to match the case.

No. 100, Standard Type

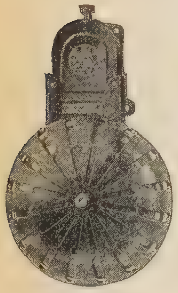
No. 100

Size In.	6-9 Volts Each	110 Volts Each	220 Volts Each	Wt., Lbs.
3	$8.80	$11.30	......	3
4	10.80	13.30	$15.80	4
6	15.00	18.12	20.60	6
8	18.80	21.90	24.40	9
10	26.30	29.40	31.90	15
12	31.30	32.50	35.00	18
14	61.60	82.50	103.50	23
16	129.30	159.20	189.10	27
18	146.95	176.90	206.80	31

No. 1001, Conduit Attachment for Use on All Type Bells, Add.. $10.00

No. 100Y, Yard Type, with Protective Hood, Add to Standard Bell.................................... 25.00

No. 100 F.G. Full Grid Type



No. 100 F.G.

Schedule T

Add to Standard bell:

Size In.	Each	Wt. Lbs.	Size In.	Add Each	Wt. Lbs.
4	$6.50	1	12	$10.50	7¾
6	7.50	2¼	14	34.50	12
8	8.00	3	16	45.00	16
10	9.00	5½	18	56.00	20

No. 217 High Voltage Type

No. 217

Schedule T

High voltage Recti bell for 300–600 volts d.c.

Has binding posts and contact mechanism on slate. Long, quick break. Operates only with gong up.

Size In.	Each	Wt. Lbs.	Size In.	Each	Wt. Lbs.
6	$68.30	6	14	$130.85	23
8	73.25	14	16	193.40	27
10	91.35	15	18	227.50	31
12	107.00	18	..	....	..

Nos. 220A and 220B Recti Buzzers

Buzzer

No. 220A has same movement as 3-inch bell; No. 220B, same movement as 6-inch.

No.	For Battery Each	110 Volts Each	220 Volts Each	Wt. Lbs.
220A	$7.90	$10.45	......	2
220B	11.90	17.95	$24.10	4

No. 222 Edwards D.C. Clapper Type Bells

Schedule T

For use in schools, etc.

Two wire entrances are provided; one at the top for surface wiring and one at the back for concealing wiring. Both are sealed with wax which may be knocked out.

Conduit fittings are made so that they may be installed with conduit and bell placed thereon after wires are pulled through. Fittings are drilled top and bottom for ½-inch conduit unless ¾-inch is specified. A pipe plug is furnished for use when bell is on end of line.

No. 222 Standard

No. 222 Standard

6-9 Volts D.C.

Size Inches	Each	Weight Pounds
3	$8.80	2
4	10.80	2¼
6	15.00	8½
8	18.80	11½
10	26.30	12½
12	31.30	16
Buzzer	7.70	1¾

For weatherproof gasket, add $1.25.

Conduit attachment, add $1.25 for separable conduit fitting for flush or surface conduit.

No. 222 F.G. Full Grid Type

6-9 Volts D. C.

6	$22.50	¾
8	26.80	1
10	35.30	1⅞
12	41.80	2½

Part grid type furnished at same prices.

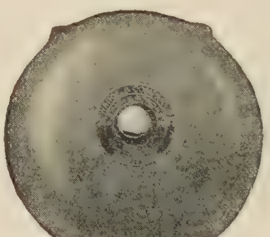
No. 222Y Yard Type With Protective Hood

Add to Standard Bell for No. 222Y.....................each $25.00

Edwards Single Stroke Bells

For Fire Alarm Systems

Schedule T



No. 23F (D.C.)
No. 24F (A.C.)

Showing Movement and Compact Construction

Solenoid type construction, giving a loud, clear ring. Operation is quick and precise, ideal for all coded signaling purposes. The construction eliminates springs and pivots. Entire mechanism is under gong. For surface conduit work a separable box is furnished with knockouts on all sides. Box can be mounted flush and an extension cover is furnished for mounting bell.

Operated either in series or multiple, but will be furnished for the latter unless specified. When conduit type is ordered, flush fitting is supplied unless otherwise specified.

No. 23F (d.c.); No. 24F (a.c.).

Size............inches	4	6	8	10	12
Weight.........pounds	4	5	6	8	11
6-48 Volts........each	$18.00	$24.00	$27.00	$32.00	$36.00
110-125 Volts.....each	18.00	24.00	27.00	32.00	36.00

Faraday Residence Call-Panels

The Modern Electric Bell

For Surface Mounting

Schedule A

An attractive installation harmonizing in color with the tone of the room.

Panel has hollow back-plates formed-up with molded edges, completely covering up the unsightly slack wires, the broken and uneven plaster and the grimy outline of the old style bells and buzzers.

Units are completely covered fully insulated and with adjustable contacts.

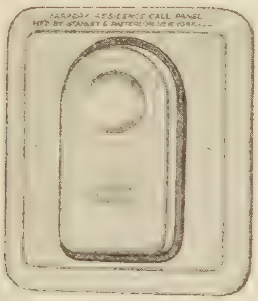
Standard finish: Panels, ivory; covers, jade green, blue or ivory, as specified.

Special color combinations such as blue, jade green or jet black panels with polished cadmium covers will be furnished on special order.

Panels will be furnished on special order with adapter-plates to mount on any standard outlet box, for new building work.

Standard package, 1.

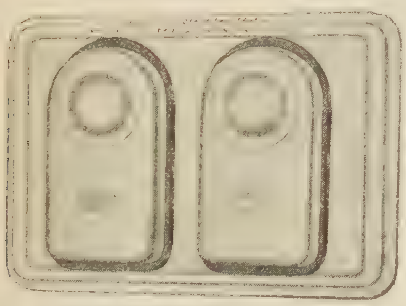
1-Unit (Small) Panels



Width, 6¼ inches; height, 7 inches.

Cat. No.	No. Signals	Description of Signal Units on Panel	Each
800	1	1—2½-Inch Buzzer	$2.80
807	1	1—Buzzer	2.80
802	2	1—Combination Bell-Buzzer	3.20

2-Unit (Medium) Panels



Width, 9½ inches; height, 6½ inches.

Cat. No.	No. Signals	Description of Signal Units on Panel	Each
820	2	1—2½-Inch Bell; 1—Buzzer	$4.00
***825**	2	1—2½-Inch Bell; 1—High-Pitch Buzzer	5.40
821	2	1—2½-Inch Bell; 1—Cow Bell	5.40
822	3	1—Comb. Bell-Buzzer; 1—Buzzer and Musical Tap	6.20
823	3	1—Bell-Buzzer; 1—Cow Bell	5.80
***824**	3	1—Comb. Bell-Buzzer; 1—High-Pitch Buzzer	5.90

3-Unit (Large) Panels

Width, 12 inches; height, 6½ inches.

Cat. No.	No. Signals	Description of Signal Units on Panel	Each
830	3	1—2½″ Bell; 1—Buzzer; 1—Musical Tap	$6.90
831	3	1—2½″ Bell; 1—Buzzer; 1—Cow Bell	6.90
***832**	3	1—2½-Inch Bell; 1—Buzzer; 1—High-Pitch Buzzer	7.00
833	3	1—2½-Inch Bell; 1—Cow Bell; 1—Musical Tap	8.30
834	4	1—2½-Inch Bell; 1—Cow Bell; 1—Buzzer and Musical Tap	9.10
***835**	4	1—2½-Inch Bell; 1—High-Pitch Buzzer; 1—Buzzer and Musical Tap	9.20

*Operate on 8-volt transformer only. All others operate on 8-volt transformer or battery.

PR Eclipse Small Bells, Buzzers and Bell-Buzzers

Schedule E

All bells and buzzers shown will be furnished in pearl gray finish with polished nickel gongs at no additional charge if so specified. Unless specified, satin-cadmium will be supplied.

Covered—With Fully-Enclosed Double-Magnet Mechanisms, Binding Posts and Gongs

Cat. Nos. 500 and 600

Non-Adjustable

Cat. No.	Per 100	Description	Std. Pkg.
500	**$63.75**	2½-Inch Bell	100
501	**55.00**	Small Buzzer	100
507	**61.25**	Large Buzzer	100
502	**112.50**	Bell-Buzzer	50
512	**250.00**	Cow Bell	10
513	**250.00**	Sleigh Bell	10
		Adjustable	
600	**$110.25**	2½-Inch Bell	50
601	**102.00**	Small Buzzer	24
607	**108.25**	Large Buzzer	24
602	**159.00**	Bell-Buzzer	10
612	**300.00**	Cow Bell	5
613	**300.00**	Sleigh Bell	5

For Complete Colored Jade Green, Blue, Ivory or Jet Black Covered Bells, Buzzers and Bell-Buzzers, Add to Price of Satin-Cadmium (Standard Package, 25 of 1 Color) **$15.00**

For Complete Polished-Cadmium Covered Bells, Buzzers and Bell-Buzzers, Add to Price of Satin-Cadmium (Standard Package, 25) **25.00**

For Oak, Mahogany or Walnut Finish of Nos. 501 and 601 Small Buzzers, Add to Price of Satin-Cadmium (Standard Package, 10 of 1 Finish) **45.00**

Colored Covers

No. **500-C**, Jade Green, Blue, Ivory or Jet Black Covers (Standard Package, 25 of 1 Color) ....per 100 **$15.00**

No. **500-PC**, Polished-Cadmium Covers (Standard Package, 25) ....per 100 **25.00**

No. 525 Counter Display Easel

Counter display consists of:

Cat. No.	Each	Description	Finish
500	**$.63¾**	Bell	Satin-Cadmium
500	**.78¾**	Bell	Jade Green
500	**.78¾**	Bell	Ivory
500	**.78¾**	Bell	Jet Black
507	**.76¼**	Buzzer	Blue
502	**1.37½**	Comb. Bell-Buzzer	Polished-Cadmium
501	**.55**	Small Buzzer	Satin-Cadmium

No. **525**, Complete ....each **$5.69**

Exposed Pattern—With Exposed Gongs, Fully-Enclosed Double-Magnet Mechanisms and Binding Posts

Cat. Nos. 509 and 609

Non-Adjustable

Cat. No.	Per 100	Description	Std. Pkg.
509	**$57.50**	2½-Inch Bell	100
503	**67.50**	3-Inch Bell	25
504	**92.50**	4-Inch Bell	25
505	**135.00**	Cow Bell	*25
506	**135.00**	Sleigh Bell	*25
501	**55.00**	Small Buzzer	100
		Adjustable	
609	**$104.00**	2½-Inch Bell	50
603	**118.00**	3-Inch Bell	10
604	**153.00**	4-Inch Bell	5
605	**183.00**	Cow Bell	*10
606	**183.00**	Sleigh Bell	*10
601	**102.00**	Small Buzzer	24

Commercial Single-Magnet, Non-Adjustable

With Exposed Gongs, Fully-Enclosed Mechanisms and Binding Posts

Standard package, 100.

No. **300**, 2½-Inch Bell ....per 100 **$45.00**

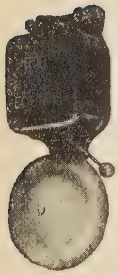
No. **301**, Small Buzzer ....per 100 **42.50**

*May be assorted to obtain standard package price.

PR Exposed Pattern Bells and Buzzers

Schedule E

For 6-Volt Transformer or 6-8-Volt Battery Circuits



With non-adjustable side contacts.
Standard resistance, 2 ohms.
Satin-cadmium finish.

Eclipse Double-Magnet Class C—Vibrating

With Exposed Gongs and Binding Posts, Fully-Enclosed Mechanisms

Standard package, 50.

No. **201**, 2½-Inch Bell.........per 100 **$92.00**
No. **200**, Buzzer...............per 100 **89.00**

Above bells and buzzers will be furnished in pearl grey finish with polished nickel gongs at no additional charge if so specified. Unless specified, satin-cadmium will be shipped.

PR XXX Adjustable Exposed Pattern Double-Magnet Bells and Buzzers

Schedule E

Class B—With Exposed Gongs and Binding Posts, Fully-Enclosed Mechanisms

For 6-Volt Transformer or 6-8-Volt Battery Circuits

With adjustable double-lock side contacts.
Standard resistance, 2 ohms.
Finished in pearl gray with nickel gong.

Cat. No.	Per 100	Description	Std. Pkg.
211	**$104.00**	2½-Inch Bell.......	50
212	**118.00**	3 -Inch Bell.......	10
213	**153.00**	4 -Inch Bell.......	5
215	**183.00**	Cow Bell..........	*10
218	**183.00**	Sleigh Bell.........	*10
210	**102.00**	Buzzer (Pearl Gray)	24

*May be assorted to obtain standard package price.

PR Marlo Exposed Pattern Double-Magnet Bells and Buzzers

Schedule E

Class A—Double-Lock-Adjustable—With Exposed Gongs, Outside and Inside Binding Posts and Fully-Enclosed Mechanisms

For 6-V Transformer or 6-8-V Battery Circuits

With pivoted armatures, back-tension-adjustment and insulated mechanisms.

Standard package, 10; may be assorted.

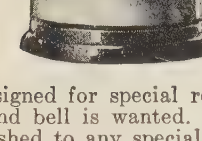
*No. **221**, 2½-Inch Bell.......per 100 **$164.00**
*No. **222**, 3-Inch Bell.........per 100 **181.00**
*No. **223**, 4-Inch Bell.........per 100 **219.00**
*No. **227**, Cow Bell...........per 100 **250.00**
*No. **228**, Sleigh Bell.........per 100 **250.00**
*No. **229**, Dome Bell.........per 100 **250.00**
No. **220**, Buzzer (Black).....per 100 **163.00**
No. **220-N**, Buzzer (Pol.-Cad.).....per 100 **163.00**

*Black with nickel gong; with polished-cadmium covers at no extra cost.

No. 238 PR 3-Inch Monitor Bells

Double Magnets for 6-Volt Transformer or 6-8-Volt Battery Circuits

Schedule T



This bell is designed for special requirements where a self-contained round bell is wanted. Standard resistance is 2 ohms. Furnished to any special resistance up to 200 ohms, inclusive at a standard list addition.

Base is provided with mounting holes. Finish is polished nickel gong with black enamel base.

Size gong, 3 inches. Standard package, 1.

Price, No. **238**..............................each **$1.80**

PR Marlo Adjustable Double-Magnet Transformer Bells and Buzzers

Schedule E

For 6-Volt Transformer Circuits

Outside and inside binding posts, enclosed mechanisms. With laminated magnet cores, carbon contacts, reed type armatures, back tension adjustments, insulated mechanisms.

Black base and cover, nickel gong.

Furnished to operate on 12–18-volt transformer or 6 to 12-volt d.c. circuits, if so specified at prices shown below.

Cat. No.	Each	Description	Std. Pkg.
231	**$6.15**	2½-Inch Bell............	6
232	**6.30**	3-Inch Bell..............	6
233	**6.75**	4-Inch Bell..............	6
257	**8.55**	Cow Bell................	1
258	**8.55**	Sleigh Bell..............	1
259	**8.55**	Dome Bell...............	1
260	**6.00**	Buzzer..................	6

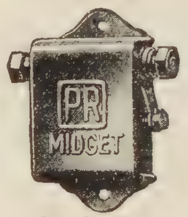
Bells and Buzzers

Schedule E

Polished-cadmium finish.

Standard package, 10; may be assorted to obtain standard package price.

PR Midget Adjustable Buzzers



Cat. No. 331

Size Inches	For Battery and D.C. 6–8 Volts Cat. No.	Each	*No-Contact Type for Transformer 8–24 Volts Cat. No.	Each
1⅝x1⅛	**330**	**$1.90**	330-AC	**$1.90**
2⅛x1$\frac{5}{16}$	**331**	**1.80**	331-AC	**1.80**
2$\frac{9}{16}$x1¾	**332**	**1.90**	332-AC	**1.90**
3 x2	**333**	**2.00**	333-AC	**2.00**

*Adjustable tone, fully insulated.

PR Midget Bells

6-8 Volts D.C., 8-10 Volts Transformer

Cat. No. 334

Cat. No............	**334**	**335**
Size Gong.....inches	1¾	1
Each...............	**$2.20**	**2.40**

No. 261 Monitor Round Adjustable Buzzers

Diameter, 2¼ inches; height, 1$\frac{9}{16}$ inches.

No. **261**, For Battery and D.C., 6–8 Volts...............each **$1.80**
No. **261-AC**, No-Contact Type for A.C. Transformer Only, Fully Insulated, 8–24 Volts. ....each **1.80**

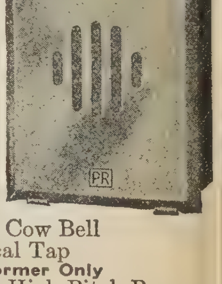
No. 239 Non-Adjustable Watchcase Buzzers

Diameter, 1¾ inches; height, ⅝ inch.

No. **239**, For Battery and D.C., 6–8 Volts.......each **$1.80**
No. **239-AC**, No-Contact Type for A.C. Transformer Only, Fully-Insulated, 8–24 Volts.............each **1.80**

Faraday Flush Residence Call-Panels

Schedule A



Consists of signalling device mounted in steel outlet box (5″ wide, 7¼″ high, 2¾″ deep), covered by hinged plate (6″ wide, 8″ high); plate is provided with sound-openings, closed from back by a wire mesh. Standard package, 1.

In jade-green, blue or ivory. For polished cadmium, add $1.00 to list.

Cat. No.	Each	No. Sig.	Description
			To Operate on 8-Volt Transformer or Battery
536	**$5.00**	2	Comb. Bell-Buzzer
921	**5.75**	2	One 2½-Inch Bell, One Cow Bell
962	**7.00**	2	One Buzzer, One Musical Tap
			To Operate on 8-Volt Transformer Only
963	**$7.15**	2	One 2½-Inch Bell, One High-Pitch Buzzer
961	**10.00**	3	Buzzer and Musical Tap, High-Pitch Buzzer

Faraday A.C. Signal Gongs

Neck Pattern

N.E.C. Standard—Schedule T

Vibrating, Clapper, Contact Type, Weatherproof Enclosed Type

For Transformer and A.C. Light and Power Circuits

Mechanisms are fully protected from dust, dampness and mechanical injury. With laminated cores, carbon contacts and bakelite insulation throughout.

Standard package, 1.

Model AT

Model CT

Model AT—Non-Guarded Gongs

Cat. No. and Size Gong	12-18V Trans. Each	110-125 V.,A.C. Each	220-250 V.,A.C. Each
AT- 4	$13.40	$23.45	$32.75
AT- 5	22.10	36.00	49.20
AT- 6	24.10	38.85	52.75
AT- 8	29.55	46.75	63.05
AT-10	51.00	70.60	88.55
AT-12	58.15	77.80	95.75

Model BT—Half-Grid-Guarded Gongs

BT- 4	$20.15	$30.15	$39.50
BT- 5	29.30	43.20	56.40
BT- 6	31.40	46.05	59.90
BT- 8	39.25	56.45	72.80
BT-10	64.75	83.35	101.30
BT-12	75.30	95.00	112.95

Model CT—Full-Screen-Guarded Gongs

CT- 4	$31.35	$41.40	$50.70
CT- 5	43.05	56.95	70.15
CT- 6	45.15	59.80	73.70
CT- 8	55.70	72.90	89.25
CT-10	83.95	103.50	121.50
CT-12	100.00	119.70	137.65

Model AT—With Rectangular or Cow-Gongs Non-Guarded

Cat. No. and Size Gong	12-18V Trans. Each	110-125 V.,A.C. Each	220-250 V.,A.C. Each
AT-112	$15.90	.....	.....
AT- 23	15.90	$25.95	$35.25
AT- 35	29.10	43.85	57.75
AT- 46	39.55	56.75	73.05

Model AT—With Sleigh Gongs—Non-Guarded

AT-111	$15.90	$25.95	$35.25

Model AT—With Dome-Gongs

AT- 21	$15.90	$25.95	$35.25

Model YT Yard-Type Gongs with Protective Hood

Cat. No. and Size Gong	12-18 V. Trans. Each	110-125 V., A.C. Each	220-250 V., A.C. Each
YT- 4	$38.40	$48.45	$57.75
YT- 5	47.10	61.00	74.20
YT- 6	49.20	63.85	77.75
YT- 8	54.55	71.75	88.05
YT-10	76.00	95.60	113.55
YT-12	83.15	102.80	120.75

For surface and flush-conduit installation furnished with separate conduit-box-backs, having combination ½-inch and ¾-inch knockouts, add $10.00 to prices.

Rectangular or cow-gongs can be furnished on Models AT and YT. Add $5.00 to price of AT-6 or YT-6 for 3⅛x5-inch gong and specify Cat. Nos. AT-35 or YT-35 respectively. Add $10.00 to price of AT-8 or YT-8 for 4¼x6-inch gong and specify Cat. Nos. AT-46 or YT-46 respectively.

Lower-priced half-grids or full-grids can be furnished at the following additions to prices of Model AT:

Size..........inches	6	8	10	12
Each..........	$7.50	8.00	9.00	10.50

Faraday A.C. Signal Gongs and Buzzers

N.E.C. Standard—Schedule T

Vibrating, Polarized Plunger Type, Dust-Proof, Enclosed, No Contact, Non-Sparking, Non-Weatherproof

For Transformer and A.C. Light and Power Circuits

High grade no-contact, non-sparking vibrating polarized mechanisms. Will stand up under practically continuous a.c. service of the most severe sort.

Bakelite insulation throughout.

Standard package, 1.

Model ATL Neck Pattern—Non-Guarded Gongs

Cat. No. and Size Gong	12-30 V. Trans. Each	110-125 V., A.C. Each	220-250 V., A.C. Each
ATL- 3	$9.30	$11.30	$13.80
ATL- 4	10.30	12.50	15.00
ATL- 6	15.00	17.20	19.70
ATL- 8	18.00	21.00	23.50
ATL-10	27.50	29.70	32.20
ATL-12	33.00	35.50	38.00
ATLB Buzzer	7.70	10.70	13.20

For half-grids (Cat. No. BTL) and full-grids (Cat. No. CTL) add to price of Model ATL:

Size In.	Each	Size In.	Each	Size In.	Each
3	$5.00	6	$7.50	10	$9.00
4	5.50	8	8.00	12	10.50

For yard-type protective hoods, add $25.00 each.

Rectangular or cow-gongs can be furnished as follows: Add $5.00 to price of ATL-6 for 3⅛x5-inch gong and specify Cat. No. ATL-35; add $10.00 to price of ATL-8 for 4¼x6-inch gong and specify Cat. No. ATL-46.

Model ATLD Double-Gong Pattern Non-Guarded Gongs

Cat. No. and Size Gong	12-30 V. Trans. Each	110-125 V., A.C. Each	220-250 V., A.C. Each
ATLD- 3	$10.30	$12.30	$14.80
ATLD- 4	11.30	13.40	15.90
ATLD- 6	21.90	24.10	26.60
ATLD- 8	25.60	28.00	30.50
ATLD-10	30.00	32.80	35.30

For half-grids and full-grids, add to price:

Size..........inches	3	4	6	8	10
Each..........	$10.00	11.00	15.00	16.00	18.00

Furnished W.P. for outside use at an addition of $1.25.

Model MTL Monitor Pattern—Non-Guarded Gongs

Specify voltage desired when ordering.

Cat. No. and Size Gong	12-30 V. Trans. Each	110-125 V., A.C. Each	220-250 V., A.C. Each
MTL- 4	$10.30	$12.50	$15.00
MTL- 6	15.00	17.20	19.70
MTL- 8	18.00	21.00	23.50
MTL-10	27.50	29.70	32.20
MTL-12	33.00	35.50	38.00
MTL-14	55.20	65.20	75.20
MTL-16	122.85	132.85	142.85
MTL-18	140.50	150.50	160.50

For half-grids, MBTL, and full-grids, MCTL, add to price of MTL:

Size..........inches	6	8	10	12
Each..........	$7.00	8.00	9.00	10.00

For half-grid-guarded-weatherproof add to prices of non-guarded non-weatherproof:

Size.....inches	8	10	12	14	16	18
Each..........	$15.00	17.00	19.50	43.40	53.90	68.90

For full-screen-guarded-weatherproof, add to prices of non-guarded non-weatherproof:

Size....inches	8	10	12	14	16	18
Each.........	$33.00	35.00	37.50	72.90	89.90	107.90

CONDUIT BELLS.—Adapter-plate allows any bell to be mounted on standard 4-inch square box or extension cover. Also fits single or double-gang condulet. Adapter-plate furnished as standard with 110 or 220-volt bells. On low voltage bells specify "conduit bell" if desired and add $1.25. Cast wall box can be furnished at $1.25 list addition to 110 or 220-volt bells; $2.50 list addition to low voltage bells.

Model KTS Faraday A.C. Signal Gongs

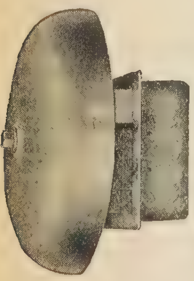
Monitor Pattern

Schedule T

Single-Stroke, Solenoid-Plunger Type, Non-Weatherproof, Non-Guarded Gongs

For Transformer and A.C. Light and Power Circuits

For general use and for paging systems of the code-calling type. Not suitable for closed-circuit-approved fire alarm systems where Underwriters approved gongs of 5150 or 5120 pattern should be used.



Regularly provided, without extra charge, with separable conduit-box-backs, adaptable to both surface and flush conduit installations. Boxes regularly have ½-inch knockouts; with ¾ inch, when specially ordered.

Standard package, 1.

Cat. No. and Size Gong	12-30 V. Trans. Each	110-125 V.,A.C. Each	220-250 V.,A.C. Each
KTS- 4	$10.30	$10.30	$13.50
KTS- 6	13.80	13.80	14.40
KTS- 8	15.80	15.80	16.40
KTS-10	19.30	19.30	19.90
KTS-12	22.50	22.50	23.10

For full-grids add to list prices:

Size..........inches	4	6	8	10	12
Each...............	$5.50	7.50	8.00	9.00	10.00

Faraday A.C. Single-Stroke Fire Alarm Gongs

Schedule D

Listed as standard by National Board of Fire Underwriters. A.C. fire alarm gongs are arranged to be wired in series. Not more than 10 gongs can be used on any 110-125-volt a.c. circuit.

Specify the number of gongs required on each circuit and the voltage of the circuit.

Regularly provided, without extra charge, with separable conduit-box-backs, adaptable to both surface and flush conduit installations. Boxes regularly have ½-inch knockouts; furnished with ¾-inch knockouts when so ordered.

Standard package, 1.

No. 5150 Monitor Pattern—Non-Guarded

Size............inches	4	6	8	10	12
No. 5150.........each	$18.00	24.00	27.00	32.00	36.00

No. 5120 Neck Pattern

Size............inches	4	6	8	10	12
No. 5120.........each	$18.00	24.00	27.00	32.00	36.00

Model MTTL Faraday A.C. Traffic-Signal Gongs

Monitor Pattern

Schedule T

Vibrating, Polarized, Weatherproof Enclosed, Non-Guarded Gongs

For Operation on A.C. Transformer or 100-110 Volt and 220-250 Volt Light and Power Circuits, 60 Cycles

Mechanism is polarized, no-contact non-sparking plunger-pattern with special hardened steel bearings, etc., to guarantee dependable signal operation where the work is practically continuous.

Mechanism is protected from dust, dampness and mechanical injury. Bakelite insulation throughout.

When ordering, specify cycles.

Regularly provided, without extra charge, with separable conduit-box-backs, adaptable to both surface and flush conduit installations. Boxes regularly have ½-inch knockouts but will be furnished ¾ inch when specially ordered.

Standard package, 1.

Cat. No. and Size Gong	18-30 V. Trans. Each	100-110 V., A.C. Each	220-250 V., A.C. Each	Cat. No. and Size Gong	18-30 V. Trans. Each	100-110 V., A.C. Each	220-250 V., A.C. Each
MTTL-6	$27.00	$30.75	$33.75	MTTL-10	$42.00	$45.75	$48.25
MTTL-8	32.00	35.75	38.25	MTTL-12	52.00	55.75	58.25

Neck pattern Cat. No. ATTL can be furnished at same price if desired.

For BTTL half-grid guarded, add:

Size.........inches	8	10	12	14	16	18
Each..............	$15.00	17.00	19.50	43.40	53.90	68.90

For CTTL full-screen guarded, add:

Size.........inches	8	10	12	14	16	18
Each..............	$33.00	35.00	37.50	72.90	89.90	107.90

Model ATN Faraday-Marlo A.C. Transformer Signal Gongs and Buzzers

Neck Pattern

N.E.C. Standard—Schedule T

Vibrating, Clapper, Contact Type, Non-Weatherproof, Non-Guarded, Gongs Enclosed

For Transformer and A.C. Light and Power Circuits, 50-60 Cycles

Black enameled cases with bauer-barff finished gongs, polished nickel binding posts.

Standard package, 1.

Specify Cat. No. and voltage when ordering.

Cat. No. and Size Gong	6-9 V. Trans. Non-Conduit Each	With Adapter-Plate for Conduit: 110-125 V., A.C. Each	With Adapter-Plate for Conduit: 220-250 V., A.C. Each
ATN- 3	$9.30	$11.30	Not Made
ATN- 4	10.30	12.50	Not Made
ATN- 6	15.00	17.20	$41.25
ATN- 8	18.00	21.00	44.50
ATN-10	27.50	29.70	53.65
ATN-12	33.00	35.50	78.25
ATN-B Buzzer	7.70	10.70	31.20

For half-grids and full-grids add:

Size........in.	6	8	10	12
Each.........	$7.50	8.00	9.00	10.50

For yard-type protective hoods, add $25.00 each.

Conduit Bells.—Adapter-plate permits mounting of any bell on standard 4-inch square box or extension cover. Also fits single or double-gang condulet. Adapter-plate furnished regularly at no extra charge with 110-130-volt bells. If desired on low-voltage bells specify "conduit-bell" and add to list $1.25. Cast wall-box can be furnished, if desired; add $1.25 to list of 110-volt bells and $2.50 to list of low-voltage bells.

Rectangular or cow-gongs can be furnished as follows: Add $5.00 to price of ATN-6 for 3⅛x5-inch gong and specify Cat. No. ATN-35; add $10.00 to price of ATN-8 for 4¾x6-inch gong and specify Cat. No. ATN-46.

Model ATN gongs furnished weatherproof at $1.25 extra.

Model XMTS Faraday A.C. Single-Stroke Special-Toned Gongs and Buzzers

N.E.C. Standard—Schedule T

For Transformers and 60-Cycle A.C. Circuits

Standard package 1.

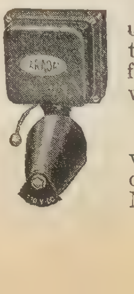
No. XMTS-20

Cat. No.	12-24 V. Trans. Each	110-125 V., A.C. Each	220-250 V., A.C. Each
Soft-Toned Gong			
XMTS-20	$18.00	$27.10	$35.20
Musical-Toned Gong			
XMTS-30	$25.00	$27.50	$30.00
Special-Toned Cow-Gong			
XMTS-40	$24.00	$33.10	$41.20
Special-Toned Buzzer			
XMTB-50	$14.80	$23.00	$31.20

No. 2502-A Faraday A.C. Trouble-Bells

N.E.C. Standard—Schedule D

For Operation on 110-125 Volts, 60 Cycles A.C.



A high grade, dependable vibrating gong for use with fire or sprinkler or burglar alarm control cabinets to indicate by continuous ringing, failure of operating current, breaking of circuit wires, etc.

Standard package, 1.

When ordering bells to operate on 100-110 volts a.c., specify frequency (number cycle) of circuit.

No. 2502-A........................each $30.00

Faraday D.C. Signal Gongs

Neck Pattern

N.E.C. Standard—Schedule T

Vibrating, Clapper, Contact Type, Weatherproof, Enclosed Type

For Battery and D.C. Light and Power Circuits

Mechanisms are fully protected from dust, dampness and mechanical injury. Bakelite insulation throughout.

Standard package, 1.

Model A—Non-Guarded Gongs

Cat. No. and Size Gong	Battery 6-9 V. Each	110-125 V., D.C. Each	220-250 V., D.C. Each
A- 1¾	$6.60	......	......
A- 2	7.25	......	......
A- 2½	7.80	......	......
A- 3	8.85	......	......
A- 4	10.85	$19.05	$27.30
A- 5	15.80	27.90	40.00
A- 6	17.80	30.50	43.25
A- 8	22.00	36.95	51.90
A-10	36.95	54.90	72.85
A-12	49.90	67.80	85.80
A-14	61.60	82.50	103.50
A-16	129.25	159.15	189.10
A-18	146.90	176.85	206.75

Model A—With Rectangular or Cow-Gongs

Cat. No. and Size Gong	Battery 6-9 Volts Each	110-125 V., D.C. Each	220-250 V., D.C. Each
A-112	$11.35	......	......
A- 23	13.35	$21.55	$29.80
A- 35	22.80	35.50	48.25
A- 46	32.00	46.95	61.90

Model A—With Sleigh Gongs—Non-Guarded

A-111	$13.35	$21.55	$29.80

Model A—With Dome-Gongs

A- 21	$13.35	$21.55	$29.80

Model B—Half-Grid-Guarded Gongs

B- 4	$17.60	$25.80	$34.05
B- 5	22.95	35.10	47.20
B- 6	25.00	37.70	50.40
B- 8	31.70	46.70	61.60
B-10	49.65	67.60	85.55
B-12	67.10	85.05	103.00
B-14	101.20	122.15	143.10

Model C
Full-Screen-Guarded Gongs

Cat. No. and Size Gong	Battery 6-9 V. Each	110-125 V., D.C. Each	220-250 V., D.C. Each
C- 4	$28.80	$37.00	$45.20
C- 5	36.75	48.85	60.95
C- 6	38.75	51.45	64.20
C- 8	48.15	63.15	78.10
C-10	69.85	87.70	105.75
C-12	91.80	109.75	127.70
C-14	128.85	149.80	170.75

Model Y
Yard-Type Gongs
With Protective Hood

Cat. No. and Size Gong	Battery 6-9 V. Each	110-125 V., D.C. Each	220-250 V., D.C. Each
Y- 4	$35.85	$44.05	$52.30
Y- 5	40.80	52.90	65.00
Y- 6	42.80	55.50	68.25
Y- 8	47.00	61.95	76.90
Y-10	61.95	79.90	97.85
Y-12	74.90	92.80	110.80
Y-14	86.60	107.50	125.50

For separable conduit-box backs, having combination ½ and ¾-inch knockout, add $10.00 to above prices.

Rectangular or cow-gongs furnished on Models Y-6 and Y-8 at following prices: Add $5.00 to A-6 or Y-6 for 3⅛″x6″ gong; add $10.00 to A-8 or Y-8 for 4¼″x6″ gong.

For lower-priced half-grids or full-grids add to prices of Model A:

Size.................inches	4	6	8	10	12
Each..................	$5.50	7.50	8.00	9.00	10.50

Vibrating Bells

Regular Gongs, Sched. E—Fancy Gongs, Sched. T

Clapper Type, Non-Weatherproof

Model O Faraday Skeleton Bells

For Battery Circuits Only

Designed to meet the requirements of good signal gongs with exposed mechanisms; high power patented pivoted armatures. Breakage of tension springs cannot disable gongs.

Contacts regularly Platinoid; platinum contacts, at an extra price. Bakelite insulation.

Wound to any special resistance at standard list additions; furnished converted-single-stroke when ordered at $2.50 net extra. For important single-stroke work, standard single-stroke gongs are recommended.

For yard-type protected hoods, add $25.00 each.

With Regular Gongs

Cat. No. and Size Gong	Each	Resistance Ohms	Std. Pkg.	Cat. No. and Size Gong	Each	Resistance Ohms	Std. Pkg.
O-2½	$5.70	3	5 Ass't.	O-10	$24.85	5	5 Ass't.
O-3	6.05	3	5 Ass't.	O-12	31.00	5	5 Ass't.
O-4	7.10	3	5 Ass't.	O-14	62.00	5	5 Ass't.
O-5	9.35	4	5 Ass't.	O-16	123.70	8	5 Ass't.
O-6	10.55	4	5 Ass't.	O-18	143.25	8	5 Ass't.
O-8	16.00	5	5 Ass't.	....	......	..	....

With Fancy Gongs

Cat. No.	Each	Type	Frame No.	Size In.	Std. Pkg.
O-112	$9.05	Cow or Rectangular	1	1¾x2½	1
O- 23	9.20	Cow or Rectangular	1	2 x3	1
O- 35	15.55	Cow or Rectangular	2	3⅛x5	1
O- 46	26.00	Cow or Rectangular	3	4¼x6	1
O-111	9.05	Sleigh.............	1	1½x1¾	1
O- 21	9.05	Dome..............	1	2½x1¼	1

Model Z Faraday-Ekla Skeleton Bells

For Battery Circuits Only

With back adjustment reed-type armatures and adjustable side contacts. Pure silver contacts. Bakelite insulation.

Wound to any special resistance at standard list additions; furnished converted-single-stroke when ordered at $2.50 net additional, but for important single-stroke work, standard single-stroke gongs are recommended.

For yard-type protected hoods, add $25.00 each.

Cat. No. and Size Gong	Each	Resistance Ohms	Std. Pkg.	Cat. No. and Size Gong	Each	Resistance Ohms	Std. Pkg.
Z-2½	$5.25	3	5 Ass't.	Z- 6	$8.85	4	5 Ass't.
Z-3	5.55	3	5 Ass't.	Z- 8	14.35	5	5 Ass't.
Z-4	6.60	3	5 Ass't.	Z-10	21.30	5	5 Ass't.
Z-5	7.80	4	5 Ass't.	Z-12	27.50	5	5 Ass't.

Model EA Faraday-Ekla Covered Bells

For Transformer or Battery Circuits

Reed-type armatures with back tension adjustments and adjustable side contacts. Heavy pressed steel frames and covers. With extra large double-magnets. Bakelite insulation.

For yard-type protected hoods, add $25.00 each.

Standard package, 5 assorted.

Cat. No. and Size Gong............	EA-3	EA-4	EA-6	EA-8	EA-10	EA-12
Model EA.....each	$5.55	6.60	7.80	11.40	15.00	21.20

PR Model Q Single-Magnet Commercial Covered Bells

For Transformer or Battery Circuits

With covered mechanisms, exposed gongs and binding posts. Made with pressed steel frames.

The 4 and 6-inch sizes are designed for operation on 3-6-volt battery or 6-8-volt transformer; 8-inch size for 6-volt battery or 12-volt transformer.

Finished in black; polished nickel gong and posts.

Standard package, 5 assorted.

Cat. No. and Size Gong.............	Q-4	Q-6	Q-8
Model Q.......................each	$3.15	4.00	6.70

Model AN Faraday-Marlo D.C. Signal Gongs

Neck Pattern

N.E.C. Standard—Schedule T

Vibrating, Commercial Grade, Clapper, Contact Type, Non-Weatherproof, Non-Guarded Gongs, Enclosed

For Battery and D.C. Light and Power Circuits

Black enameled cases with bauer-barff finished gongs, polished nickel binding posts.

Standard package, 1.

Specify Cat. No. and voltage when ordering.

Cat. No. and Size Gong	Battery 6-9 V. Non-Conduit Each	With Adapter-plate — For Conduit — 110-125 V., D.C. Each	220-740 V., D.C. Each
AN-3	$8.80	$11.30	Not Made
AN-4	10.80	12.50	$15.80
AN-6	15.00	17.20	20.60
AN-8	18.80	21.00	24.40
AN-10	26.30	29.70	31.90
AN-12	31.30	35.50	35.00
AN-B Buzzer	7.70	9.50	24.10

For half-grids and full-grids add:

Size.....in.	4	6	8	10	12
Each.....	$5.50	7.50	8.00	9.00	10.50

For yard-type protected hoods, add $25.00 each.

Conduit Bells.—Adapter-plate permits mounting of any bell on standard 4-inch square box or extension cover. Also fits single or double-gang condulet. Adapter-plate furnished regularly with 110-125-volt bells. If desired on low-voltage bells specify "conduit bell" and add $1.25 to list price. Cast wall-box can be furnished if specified with 110-volt bells at $1.25 addition to list price and low-voltage bells at $2.50 addition to list price.

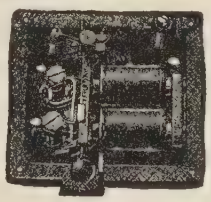
Rectangular or cow-gongs can be furnished on Cat. Nos. AN-6 and AN-8 at the following prices: Add $5.00 to price of AN-6 for 3⅛x5-inch gong; add $10.00 to price of AN-8 for 4¼x6-inch gong.

Model AN gongs furnished weatherproof at $1.25 extra.

Faraday Signal Buzzers

N.E.C. Standard—Schedule T

Enclosed Type



Open Type

These buzzers never fail to give a signal.

Close fitting, rubber-gasketed covers protect mechanisms. All current-carrying parts mounted on bakelite pads, completely insulating same from frame. Contacts regularly Platinoid; pure platinum, extra. Standard package, 1.

For Transformer and A.C. Light and Power Circuits

Cat. No.	Type	12-18 V. Trans. Each	110-125 V., A.C. Each	220-250 V., A.C. Each	Dimen. In.
93-T	Encl.	$7.75	.....	.....	2 9/16 x2 9/16x1 1/4
*99-TD	Encl.	3.50	$4.00	.....	.....
99-T	Encl.	8.75	.....	.....	3 3/16 x3 1/2x1 3/4
101-T	Encl.	10.00	20.00	$29.30	3 15/16x4 1/16x2 1/16
94-T	Encl.	12.00	22.00	31.30	4 1/4 x4 3/4x2 1/4
†94-TB	Encl.	14.00	24.00	33.30	.....
89-T	Open	7.25	.....	.....	2 x2 x1 1/8
91-T	Open	8.25	.....	.....	2 9/16 x2 9/16x1 1/8

For Battery and D.C. Light and Power Circuits

Cat. No.	Type	Battery 6-9 V. Each	110-125 V., D.C. Each	220-250 V., D.C. Each	Dimen. In.
93	Encl.	$7.75	.....	.....	2 9/16 x2 9/16x1 1/4
99	Encl.	8.75	.....	.....	3 3/16 x3 1/2x1 3/4
101	Encl.	10.00	$20.00	$29.30	3 15/16x4 1/16x2 1/16
94	Encl.	12.00	22.00	31.30	4 1/4 x4 3/4x2 1/4
†94-B	Encl.	14.00	24.00	33.30	.....
89	Open	7.25	.....	.....	2 x2 x1 1/8
91	Open	8.25	.....	.....	2 9/16x2 9/16x1 1/8

*Diaphragm type, no contacts. †With 1¾-inch gong.

Faraday Watertight Signal Gongs and Buzzers

Schedule T

For Operation on A.C. and D.C. Circuits

Vibrating, Cast Bronze Case

Nos. WA-6 and WTA-6

Designed for marine work, mines, chemical factories and such places where it is necessary to protect the contacts of bells from water, gas fumes, etc.

Standard finish—boxes, natural brass; covers and gongs, black-nickel.

Specify exact voltage required, when ordering.

Regularly furnished with cast bronze cases; with cast aluminum cases in accordance with U. S. Navy specifications, if so specified, at an addition of 15% to list.

Standard package, 1.

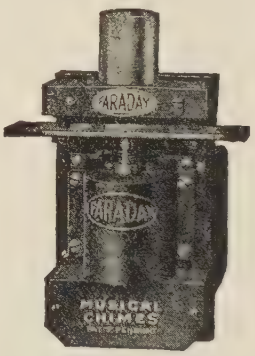
Cat. No. and Size Gong	A.C., Enclosed Type 18-30 V. Trans. Each	100-125 V. Each	220-250 V. Each	Cat. No. and Size Gong	D.C., Monitor Type 4-47 V. Each	48-125 V. Each	220-250 V. Each
WTA-3	$16.65	$18.40	$20.60	WA-3	$17.25	$18.25	$20.75
WTA-4	18.95	20.60	23.00	WA-4	19.50	20.75	23.00
WTA-6	21.25	23.00	25.30	WA-6	21.75	23.00	25.25
WTA-8	25.85	27.60	29.30	WA-8	26.50	27.75	30.00
WTA-10	30.45	32.20	34.50	WA-10	31.00	32.25	34.50
WTA-12	35.05	36.80	39.10	WA-12	35.75	37.00	39.25
WTA-Cow	23.55	25.30	27.60	WA-Cow	24.25	25.50	27.75
WTA-Buzzer	16.65	18.40	20.60	WA-Buzzer	16.00	17.25	19.50

Single-Stroke, Cast Bronze Case

For a.c. or d.c. enclosed type gongs, deduct $1.00 from prices shown above.

Faraday Single-Stroke Musical Chimes

N.E.C. Standard—Schedule T



Pressed steel housing covers mechanism beneath musical bar.

Standard package, 1.

Model RTS

For Transformer and 60-Cycle A.C. Circuits

18-30 V. Trans.....	each	$27.50
110-125 V., A.C.....	each	30.00
220-250 V., A.C.....	each	32.50

Model RS

For Battery and D.C. Circuits

Battery 6-9 Volt....	each	$27.50
110-125 V., D.C.....	each	30.00
220-250 V., D.C.....	each	32.50

When specially ordered, can be furnished with round brass-gong equipment; prices on application.

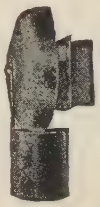
Model XMS Faraday D.C. Single-Stroke Special-Toned Gongs and Buzzers

N.E.C. Standard—Schedule T

For Battery and D.C. Circuits

These gongs and buzzers are regularly provided without extra charge, with standard separable conduit-box-backs adaptable to both surface and flush conduit installations.

Standard package, 1.



No. XMS-30

Cat. No.	Soft-Toned Gong Battery 6-9 V. Each	110-125 V., D.C. Each	220-250 V., D.C. Each
XMS-20	$20.00	$27.10	$30.00
	Musical-Toned Gong		
XMS-30	$25.00	$27.50	$30.00
	Special-Toned Cow-Gong		
XMS-40	$24.00	$33.10	$41.20
	Special-Toned Buzzer		
XMB-50	$9.35	$17.55	$25.75

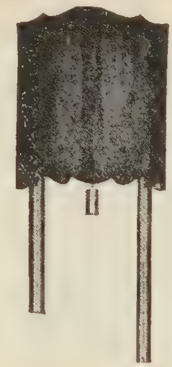
Square D Electro Chimes Guest Announcers

No. A-1 Hallboy

Has compact walnut case with chime rods inclosed. Operated by solenoid and rings from 4 to 8 times.

Is 15 inches high, 6½ inches wide, 3 inches deep.

No. **A-1**......each **$20.00**



No. B-1 Longboy

Walnut case and polished brass chime tubes. Mechanism similar to No. A-1.

Is 53 inches long, 8 inches wide, 3 inches deep.

No. **B-1**......each **$21.00**

No. C-2 Windsor

Bronze colored metal front. Polished brass tubes. One ring back door signal, two rings front door.

Is 53 inches long, 7¼ inches wide, 3 inches deep.

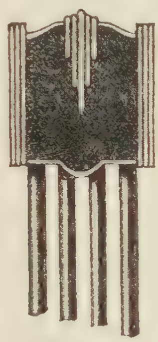
No. **C-2**......each **$14.00**

No. D-2 Tudor

Same as No. C-2, but with shorter bronze colored tubes.

Is 42 inches long, 7¼ inches wide, 3 inches deep.

No. **D-2**......each **$12.00**



No. F-1 Westminster

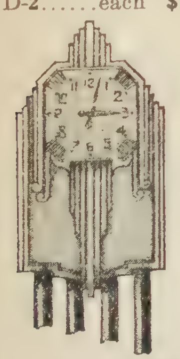
A 4-tube Westminster chime chromium and black finish with satin finish chromium chime tubes. Motor operated and strikes 8 notes.

Is 66 inches long, 9 inches wide, 4 inches deep.

No. **F-1**......each **$55.00**

No. F-2 Canterbury

Same as No. F-1.

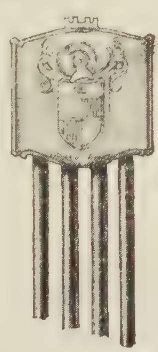


No. G-3 De Luxe

A 4-tube Westminster chime, chromium and black finish with chromium chime tubes. Motor operated. Electric clock.

Same dimensions as F-1.

No. **G-3**......each **$155.00**



No. F-3 Kensington

Same as No. F-1 and F-2, except case and chime tubes finished in bronze.

No. **F-3**......each **$65.00**

No. F-4 Essex

Same as No. F-3.

For 3-tube chimes in the F and G Models, deduct $5.00 from list price. For 5-tube models, add $15.00 to list price. If back door signal is required, add $5.00 to price.

Deagan Door Chimes

Chimes are chromium-plated and are suspended from a black bakelite wall plate. Lustro-gold finish tubes optional.

Nos. 505, 504, 503 and 502 with Telechron motored chiming device and 16 to 24-volt transformer.

No. 505—5-Tone Model

Plays all 5 tones at each pressure on push button. Six different sequences or arrangements of notes.

Overall dimensions, 12⅜x55 inches.

No. **505**..................each **$70.00**

No. 504—4-Tone Model

Plays all 4 tones at each push button pressure. Plays different sequence of notes each time—no repetition until seventh sequence.

Overall dimensions, 10⅜x55 inches.

No. **504**..................each **$62.50**

No. 503—3-Tone Model

Plays 4 notes each time and plays 6 different sequences.

Overall dimensions, 8⅜x55 inches.

No. **503**..................each **$55.00**

No. 502—2-Tone Model

Has only 2 tones but plays 3 notes at each pressure on push button. Six different sequences or melodies.

Overall dimensions, 6⅜x55 inches.

No. **502**......................................each **$47.50**

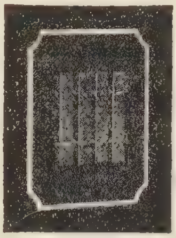
No. 501—Single-Tone Model

Dimensions, 4⅜x48 inches. With transformer.

No. **501**......................................each **$17.00**

Prices are based on a.c., 110 volts, 50 or 60 cycles. Prices for a.c., 25 or 33 cycles or for d.c., on request.

No. 514



These chimes have a soft mellow harp-like tone.

Bars are jap bronze; base is walnut finished.

Telechron motored chiming device plays 4 tones in each of 6 different sequences. Furnished with transformer.

Dimensions, 11⅜x16⅜ inches.

No. **514**......................................each **$67.50**

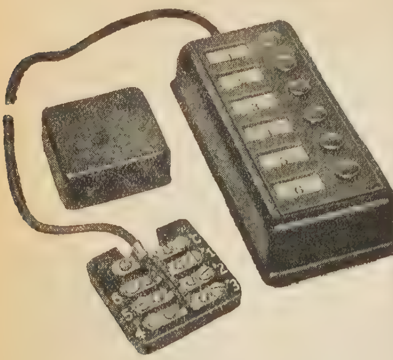
Keyboards for Deagan Dinner Chimes

An attractive keyboard for manually playing the individual tones. An ideal means of announcing meal time, summoning servants, etc.

Has chromium-plated base and ivory composition keys with graphalloy contacts.

Model	5 Tone	4 Tone	3 Tone	2 Tone	1 Tone
Each	$15.00	12.50	10.00	7.50	5.00
For Chimes No.	505	504, 514	503	502	501

No. 197 Edwards Bakelite Directory Desk Pushes



Schedule E

Has phosphor bronze scrapping contacts and is fully insulated.

Base is covered with soft sponge rubber.

Has changeable name cards.

Standard color, black. Mahogany, oak or walnut, no extra charge.

Standard package, 5 assorted.

No. of Buttons	With 6-Foot Cord and Connector Each	With 6-Foot Cord Only Each	Without Cord Each	*Wt., Oz.
1	$4.40	$3.30	$2.50	4
2	5.26	4.10	3.00	4
3	6.44	5.20	3.50	5
4	7.44	6.10	4.30	6
5	10.00	8.50	5.80	7
6	12.06	10.30	7.30	8

*Weight of push only.

No. 195 Edwards Combination Desk Pushes and Buzzers

Schedule T

A buzzer is included within the push itself. Standard finish is black; mahogany or oak, at no extra charge.

There must be 2 more conductors than buttons.

No. of Buttons	Without Cord Each	With 6-Ft. Cord Attached Each	No. of Buttons	Without Cord Each	With 6-Ft. Cord Attached Each
1	$9.90	$10.44	6	$22.50	$25.58
2	11.00	12.32	8	30.00	33.96
3	13.00	14.76	10	37.50	42.34
4	15.80	18.00	12	45.00	50.70
5	19.00	21.64	..	.....	.....

For Larger Sizes, Add per Button.................... $2.50
For Flexible Cord Only, per Foot per Conductor..... .08
Over 100 Feet, per Foot per Conductor............... .06
Can be furnished with connector. Price on application.

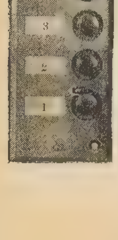
No. 190 Edwards Wood Desk Pushes

Schedule T

Weighted, felt-covered base. Standard finish, oak and nickel; mahogany and brass, no extra charge. Black buttons.

No. of Buttons	Without Cord Each	With 6-Foot Cord Attached Each	Wt., Oz.	No. of Buttons	Without Cord Each	With 6-Foot Cord Attached Each	Wt., Oz.
1	$3.90	$4.40	6	6	$10.80	$13.88	13
2	5.30	6.62	8	8	13.70	17.66	16
3	6.60	8.36	10	10	16.40	21.24	19
4	8.10	10.30	11	12	20.25	25.97	21
5	9.40	12.04	12	..	.....	.....	..

Can be furnished with connector. Price on application.



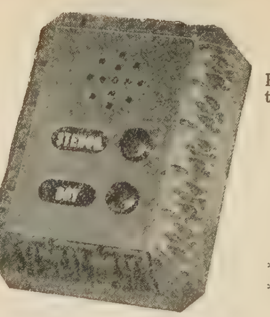
No. 191 Edwards Directory Plates

Furnished without wood mat.
For flush mounting in desk or wall.
Standard finish is nickel-plate; brush brass at no extra charge.

Same price as No. 190, without cord.

Edwards Cast Bronze Desk Pushes

Names are interchangeable. No. 143 is wound for 6 volts, d.c. or 8 volts a.c. Up to 24 volts, no extra charge.
Width, 2¾ inches. Height, 1⅛ inches.



Standard finish, bank bronze.

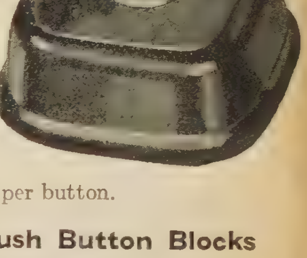
Buttons	No. 142 Without Buzzer Each	No. 142 Lgth. In.	No. 143 With Buzzer Each	No. 143 Lgth. In.
1	$9.90	2½	$15.00	3⅛
2	11.00	3⅛	16.00	3 13/16
3	13.00	3⅛	18.00	3 13/16
4	15.80	3 13/16	21.00	5⅛
5	19.00	5⅛	23.70	5⅛
6	22.50	5⅛	30.00	3 13/16
*8	30.00	3 13/16	37.50	5⅛
*10	37.50	5⅛	45.00	5⅛
*12	45.00	5⅛	.....	....

*Width, 3⅜ inches.

No. 146 Edwards Push Button Blocks

With Numbered Pushes

Of genuine molded Bakelite, with a removable weighted base and a sponge rubber pad. Flush, numbered, midget pushes are supplied with block. Can be mounted on the side of a desk with the use of a concealed mounting hole provided for that purpose. It will not scratch, mar or deteriorate.



Standard finish is black; mahogany or walnut no extra charge. Special engraving, initials or names, 25 cents per letter.

No. of Buttons	Price Each	No. of Buttons	Price Each
1	$2.15	4	$3.65
2	2.50	5	4.50
3	3.20	6	5.25

Over 6 buttons add 90 cents per button.

No. 145 Edwards Push Button Blocks

Without Pushes

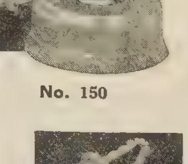
Made of molded bakelite with a removable weighted base and sponge rubber pad. Can be mounted on the side of a desk with the use of a concealed mounting hole provided for that purpose.

Drilled for ⅝-inch pushes.
Standard finish is black; mahogany or walnut at extra charge.

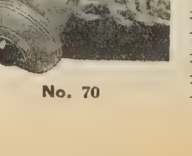
No. of Buttons	Each	No. of Buttons	Each
1	$1.90	4	$2.65
2	2.00	5	3.25
3	2.45	6	3.75

Over six buttons add 65 cents per button.

Edwards French Table and Pendant Pushes



No. 150



No. 70

For bedrooms in better class residences and apartments. Rims are gold or silver-plated. Centers are cast colored glass matched with precious stone colors. Furnished complete with 8 feet of white silk cord attached.

No. 150 is 2 1/16 inches in diameter; 1⅛ inches high. No. 70 is 1¼ inches in diameter; 2⅛ inches long.

Add to Cat. No.	Body	Center	Rim
A	Rose Quartz	Blue	Silver
B	Green Quartz	Violet	Silver
C	Green Quartz	Yellow	Silver
D	Yellow Quartz	Violet	Gold
E	Light Onyx	Black	Gold
F	Ivory	Red	Silver

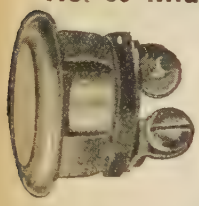
No. 150, Table Type......each $3.50
No. 70, Pendant Type.....each 3.50

No. 620 Midget Edwards Push Buttons

Fully insulated, frame not grounded and at no time carries current. Phosphor bronzed scraping contacts. Self-forming binding posts take any size wire and facilitate connecting. Non-turnable pearl center. Standard finish, nickel. Brass, no extra charge. For 5/8-inch hole. Standard package, 50.

No. 620 ..... each $.35
Black Centers, Additional ..... each .12

No. 59 Midget Edwards Push Buttons



Frame is not insulated. Non-turnable pearl center. Self-forming binding posts take any size wire.

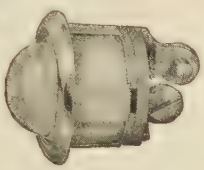
Standard finish, nickel. For 3/4-inch hole.

Standard package, 50.

No. 59 ..... each $.75

No. 625 Edwards Colored Center Push Buttons

Schedule E



For 5/8-inch hole. Has a raised center of white, black, red or blue. White is standard. Center protrudes and spring is softened. Nickel finish; brass at no extra charge. Std. package, 50.

Luminous centers, 50 cents extra.

No. 625, Wt., 1 lb. ..... each $.44

No. 621 Dixie Jr. Edwards Push Buttons

Turned from brass rod, a high grade push of heavy construction. The center is condensite and protrudes 3/16 inch.

For 5/8-inch hole. Standard finish, nickel. Standard package, 1.

No. 621 ..... each $.65

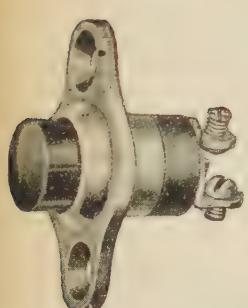
No. 116 Slow Break Edwards Push Buttons

Used in automobile controller handles, etc. Turned from brass rod. Wiping phosphor bronze contacts. Phosphor bronze springs. Condensite center. Contact member molded into condensite. For 1/2-inch hole. Standard finish, nickel. Standard package, 1.

Price, No. 116 ..... each $1.30

No. 622 Dixie Escutcheon Edwards Push Buttons

Schedule E



Turned from brass rod, of heavy construction. The center protrudes 3/16 inch. Equipped with a retaining escutcheon. Side springs are unnecessary.

Fully insulated, frame not grounded and at no time carries current. Phosphor bronze scraping contacts. Self forming binding posts take any size wire and facilitate connecting. For 1/2-inch hole.

Standard finish, nickel.

Standard package, 10.

No. 622 ..... each $.90

No. 265 Return Call Edwards Push Buttons

The frame is not grounded.

A return signal to signify that call has been heard may be installed, using three wires instead of the usual four. For 3/4-inch hole. Std. pkg., 1.

Price, No. 265 ..... each $1.90

Edwards Quick-Make Quick-Break Pushes

N. E. C. Standard

No. 84

No. 84 High Voltage Push

1 Amp., 125 V.; 1/2 Amp., 250 V.

Requires a 27/32-inch hole.

Standard finish, nickel plate. Brush brass, no extra charge. Other finishes at extra cost.

No. 84 ..... each $2.65

No. 840

No. 840 Pendant Type

This is the complete No. 84 screwed into a black bakelite shell.

No. 840 ..... each $4.50

No. 841 Weatherproof Type

Of special construction for exterior weatherproof installation.

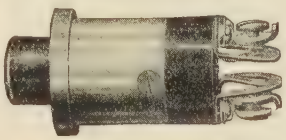
Standard finish of push and plate is bronze. No extra charge for brass. Other finishes at slight additional cost.

Rubber gasket for use between plate and wall furnished.

No. 841 ..... each $5.60

Edwards High Voltage Push Buttons

Schedule E



A quick break push with heavy contacts.

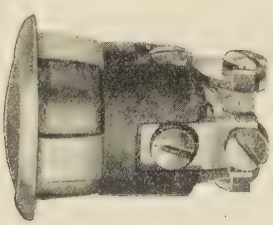
Standard finish, nickel; brush brass at no extra charge.

Cat. No.	Voltage	Description	Std. Pkg.	Wt. Oz.	Price Each
85	110	Standard Type, Fits 3/4-Inch Hole	10	1	$2.40
85A	220	Standard Type, Fits 1 1/8-Inch Hole	1	3	6.20
85P	110	Escutcheon Type, Fits 3/4-Inch Hole	1	3	3.15
85AP	220	Escutcheon Type, Fits 1 1/8-Inch Hole	1	5	6.95
85L	110	Locknut Type, Fits 7/8-Inch Hole	10	3	2.65
85C	110	Closed Circuit Type, Fits 1 1/8-Inch Hole	1	3	7.85
850	...	Hard Rub. Bushing for No. 85	1	1	1.40
850A	...	Hard Rub. Bushing for No. 85A	1	1	1.65

Edwards 4-Contact Push Buttons

Schedule E

No. 260



Will close 3 circuits at once. For use where annunciators, bells and other devices are to be operated at same time but it is not desirable to operate them in multiple. By strapping contacts it is often used on single circuits to obtain additional current carrying capacity of multiple contacts. Fits 3/4-inch hole. Phosphor bronze springs.

Standard finish, nickel; brush brass, no extra charge.

Price, No. 260, Weight 2 Ounces ..... each $1.40

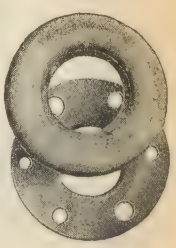
No. 260C

Same as No. 260. Closed circuit; for 3/4-inch hole.

Price, No. 260C, Weight 2 Ounces ..... each $2.05

Edwards Flush Push Escutcheons

Schedule E



For use on plaster or where larger than the midget push is required. The iron plate is first secured to the wall. There being a number of screw holes, it is always possible to engage a lath. The brass plate is then placed over the iron plate and the push button pressed into place.

The spring clips on side of button grip the iron plate securely, holding the button and top plate in place.

Standard finish, nickel; brass at no extra charge.

Standard package, 25. Weight, 12 ounces.

Price, No. 60, For 5/8-Inch Push ..... each $.30
Price, No. 61, For 3/4-Inch Push ..... each .30

Faraday Perfection Midget Push Buttons

Made in ⅝ and ¾-inch sizes, fully insulated. With self-cleaning wiping contacts of phosphor-bronze and terminal lugs. Shells of buttons carry no current, permitting mounting in metal.

Buttons have 4 spring clips, guaranteeing firm locking in proper size holes—either ⅝ or ¾ inch.

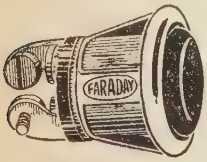
Flat-Top Pattern, ⅝-Inch Standard

Cat. No.	Each	Description	Std. Pkg.	Sched.
5-A	$.38	Pearl Centers	50	E
5-B	.50	Black Centers	20	E

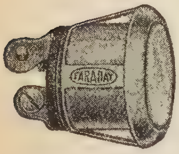
Raised-Center Pattern, ⅝-Inch Standard

Extreme height of center above level of edge is ⅛ inch, and from that, sloping off to level of rim.

Can be furnished with yellow or other standard colored centers at no additional charge, if so specified.



Cat. No.	Each	Description	Std. Pkg.	Sched.
8-A	$.44	White Centers....	20	E
8-B	.44	Black Centers....	20	E
8-C	.44	Blue Centers.....	20	E
8-D	.44	Red Centers.....	20	E
8-E	.94	Luminous Centers	1	T
9-A	.65	Black Centers, Protruding 3/16"..	10	E



¾-Inch Standard

Cat. No.	Each	Description	Std. Pkg.	Sched.
7-A	$.75	Pearl Centers	20	E
7-B	.87	Black Centers	20	E

¾-Inch Size, with Bakelite Body, Extra Heavy Contacts

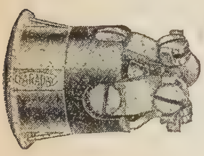
With solid molded bakelite bodies in which metal inserts are securely anchored.

Cat. No.	Each	Description	Std. Pkg.	Sched.
16-A	$1.40	Black Centers................	1	T
16-B	1.40	White Centers................	1	T
16-C	2.05	Black Centers, Closed-Circuit..	1	T

¾-Inch Size, Special Purpose, with Bakelite Body, Extra Heavy Contacts

No. 11-A buttons will close 3 circuits at once; useful where bells, annunciators and other devices are to be operated at same time, but where it is not desired to operate them in multiple. By strapping the contacts it is often used on single circuits to obtain the additional current carrying capacity of multiple contacts.

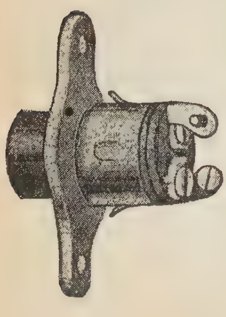
No. 15-A buttons are made so that they open one circuit and close another. For return-call systems using two common wires and one return they are invaluable.



With black centers.
Standard packages, 1.

Cat. No.	Each	Description	Sched.
11-A	$1.40	4-Contact Open-Cir....	T
12-A	2.05	4-Contact Closed-Cir...	T
13-A	2.05	3-Contact Closed-Cir...	T
14-A	1.40	3-Contact Open-Cir....	T
15-A	1.90	Return-Call..........	T

With ⅝-Inch Escutcheon



Fills the requirements where a flange mounting is necessary.

No. 10-B has an etched circular nameplate with lettering around the button reading "To Signal Chauffeur—Press This Button." Other lettering supplied to order.

Polished nickel or satin-brass finishes.

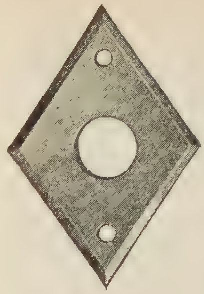
Standard package, 10.

Cat. No.	Each	Description	Sched.
10-A	$.90	Black Centers	E
10-B	On App.	Pearl Centers	E

Edwards Push Button Plates

Schedule E

No. 157 Plates



No. 157D

Diamond or square. For ⅝ or ¾-inch push. Bevel edge, drilled for one button.

No. 157D (diamond) size between points is 2⅛x3 1/16 inches. No. 157S (square) size, 1⅞ inches.

When ordering, state size of push to be used.

Assortment permitted to make standard package.

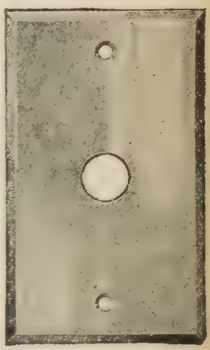
A ⅝-inch hole is furnished unless otherwise specified.

Standard finish is nickel; brass at no extra charge.

Standard package, 10. Weight, 1⅞ pounds.

Price, No. **157**..................................each **$.60**

No. 158 Switch Box Plates



No. 158

For standard switch box.

Drilled for 1, 2 or 3 buttons, ⅝-inch and 1 or 2 buttons ¾ inch. Screw hole centers, 3 9/32 inches.

Machine screws furnished. Price does not include buttons.

In ordering, state size of buttons to be used. A ⅝-inch hole will be drilled unless otherwise specified.

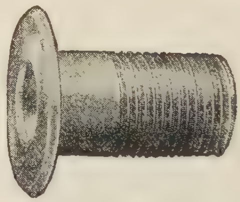
Standard finish of metal plate is nickel; brass at no extra charge.

Standard package, 1. Weight, 2 ounces.

Metal Plates

Price, **1**-Button..................................each **$.35**
Price, **2**-Button..................................each **.50**
Price, **3**-Button..................................each **.75**
Add for Bakelite Plate.................................. **.25**

No. 262 Edwards Conduit Push Buttons

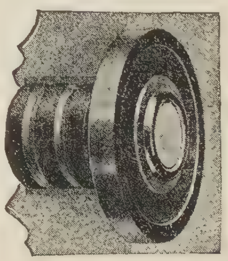


Furnished complete with attachment as illustrated, to fit ½-inch conduit. The attachment is so made as to allow the installation to be vapor proof and is used by hotels and apartment houses for bathrooms, etc. Inside the threaded brass pipe is a vertical rod which enables the attachment to be screwed on to conduit with a pair of pliers, piece of slotted pipe, etc., eliminating the use of a Stilson wrench. A special adaption of the No. 621 push, with a wider flange and other features arranged for this attachment, is used. This is numbered 621C.

Standard finish, nickel. Standard package, 1.

No. **262**, Complete..............................each **$4.00**
No. **621C**, Push Button Only....................each **2.00**

No. 261 Edwards Flush Push Stone Escutcheons Only



No. 261 Stone Escutcheon is a plain flanged casting for cementing into stone or tile work.

Drilled for ¾-inch push. The No. 260 is recommended.

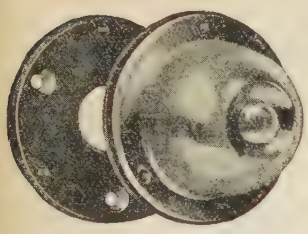
On this escutcheon the standard finish is Bauer Barff.

Standard package, 1.

No. **261**......................................each **$3.50**

No. 1786 Edwards Watertight Pushes

Schedule T



For surface mounting. Solid cast polished brass finish. Slow break type, for low voltage. Rubber gaskets make case watertight; pigskin diaphragm covers center. Has silver contacts.

Diameter of base 2⅜ inches; body 1⅝ inches. Depth, 1 3/16 inches.

Standard package, 1; shipping weight, 8 ounces.

No. **1786**.....each **$3.50**
No. **1786-C**, Conduit Plate Threaded for ½-Inch Conduit.....each **5.50**

No. 1787 Edwards Flush Watertight Pushes

For Low Voltages

Complete contact mechanism enclosed in cast brass shell covered with pig-skin diaphragm. This is tightly fastened to subplate with bronze plunger protruding through subplate. Wire leads are brought out through tight bushings.

Complete unit is watertight.

Fits any standard single gang switch box or fitting.

Gasket furnished for use between face plate and wall.

Complete with face plate.

Standard finish, bronze.

No. **1787**.....each **$5.60**

Faraday Watertight Push Buttons

Surface and Flush Types

Schedule T

No. WP-25 No. WP-30 No. WP-35 No. WP-40

These push buttons are of the diaphragm pattern having a waterproofed pigskin diaphragm over the center making it impossible for water or fumes to penetrate to the mechanism which is 100 per cent bakelite insulated.

Dependable for outside of buildings and places where dampness and water are a menace.

Nos. WP-25, WP-30, WP-40 and WP-55 furnished with rubber gaskets for mounting.

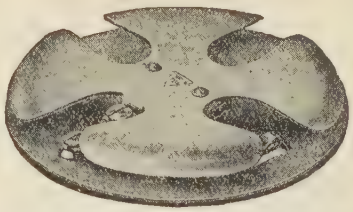
Standard finish, statuary bronze. For polished chromium, add $1.00 to list. Other special finishes, on application.

Standard package, 1.

Cat. No.	Description	Each
WP-25	Surface Pattern, Polished Bakelite Case....	$3.00
WP-30	Surface Pattern, Heavy Bronze Case with Screw-Top-Front.....	3.50
WP-35	Surface Conduit Pattern, Solid Brass Front Plate, Heavy Cast Iron Back-Box Drilled and Tapped for ½-Inch Conduit.....	7.50
WP-40	Flush Switch Box Pattern, Solid Brass Front Plate, Fits Standard Single-Gang Switch Box (Switch Box Not Included in Price)..	5.60
WP-50	Surface Pattern, Heavy Bronze Case with Screw-Top-Front with Conduit Plate Attached, Drilled for ½-Inch Conduit.....	5.50
WP-55	Surface Pattern, Same as WP-30 but Mounted on Single-Gang Switch Plate.....	5.60

No. 290 Dixie Floor Treads

Schedule E



Double heavy brass contact plates, felt covered bottom

Standard package, 10.

Price, No. **290**.....each **$1.50**

No. 206 Edwards Table Clamps

May be used in connection with floor push or wall plug. Button and contact built in to spring clamp base. Wire connections easily made. Nickel finish.

Cat. No.	Std. Pkg.	Price Each
206	10	$1.25

No. 235 Edwards Floor Push Buttons

The No. 235 Floor Push Button is of an entirely new construction, more substantial, smaller and neater than previous designs.

Equipped with removable plug and extension attachment for connecting flexible cord with lamp, etc.

Brush brass finish.

Standard package, 10; weight, 2 pounds.

No. **235**.....each **$.95**

No. 158-235

Edwards Push Button Plates

Schedule E

No. 158-235 Wall Plate and Plug

Fits a standard switch box.

Standard finish is brush brass; nickel at no extra charge.

Standard package, 1. Weight, 5 ounces.

Price, No. **158-235**.....each **$1.60**

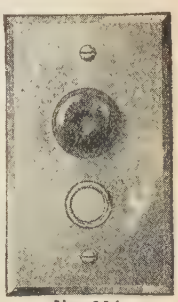
No. 204 Wall Plate

With plug and push. Fits a standard switch box. Equipped with No. 620 push and No. 235 detachable extension plug.

Six feet of flexible cord with pear push attached, furnished if specified, for which add to price, $1.75.

Standard finish is brush brass; nickel at no extra charge. Standard package, 1.

Price, No. **204**, Weight 6 Ounces .....each **$3.00**



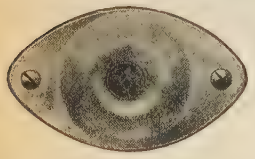
No. 204

Edwards Round Bronx Push Buttons

Has a black composition center. The mechanism is insulated and is recessed to allow the use of No. 14 wire. Standard finish, satin brass. Standard package, 100.

No.	600	603
Diameter ... inches	2¼	1¾
Each	$.15	.15

No. 606 Edwards Bronx Push Buttons



Schedule E

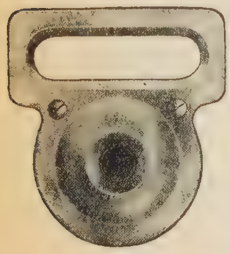
A one-piece type, all metal construction. Size, 1⅜x2⅜ in.

Finished in satin brass. Other finishes at increased prices.

In individual boxes. Standard package, 20; weight, 3½ pounds.

Price, No. **606** ....each $.25

Edwards Bronx Card Holder Push Buttons

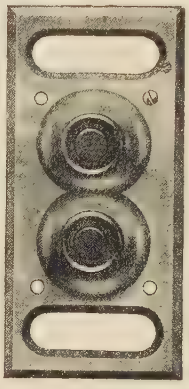


No. 601

An all-metal, one-piece type push button.

Card racks are arranged so that a slot for inserting card is at each end of rack.

Mechanism is insulated and recessed to allow use of No. 14 wire and still leave room between screws and wall. Wire is fastened directly to same screw that holds one side of contact spring; pushing the button makes a contact on one screw only.



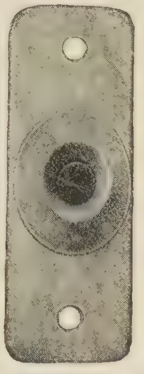
No. 602

Standard finish, satin brass.

Packed with screws in individual boxes.

Cat. No.	Each	Description	Size Inches	Std. Pkg.	Wt., Lbs. Std. Pkg.
601	**$.25**	Single Card Holder........	2½x2¼	50	5
602	**.45**	Double Card Holder.......	2 x4⅜	20	8½

No. 605 Edwards Bronx Pushes



This is an all-metal 1-piece type push, of excellent construction, well insulated.

Size, 1⅛x3¼ inches.

Standard finish is satin brass. Other finishes at increased prices.

Packed, with screws, in individual boxes for convenient shelf use.

Standard package, 20.

Weight, standard package, 3¾ pounds.

Price, No. **605**.....................................each **$.35**

No. 67 Edwards Bakelite Pear Pushes

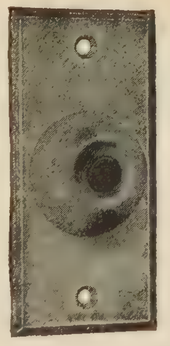
Schedule E

Keeps its finish indefinitely, will not warp, check or crack. With No. 620 push.

Standard package, 10, one color.

No. **67**, Black, Oak or Mahogany.each **$.60**
No. **67**, White Enamel...........each **.75**

No. 604 Edwards Bronx Plate Type Push Buttons

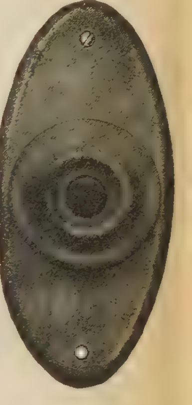


The dimensions of the No. 604 push are small enough to allow its use in many places where the common plate type of push is too large to be adaptable. It is 3$\frac{15}{16}$ inches long and 1$\frac{9}{16}$ inches wide.

The mechanism is entirely insulated and is recessed to allow the use of No. 14 wire and still leave plenty of room between the screws and the wall, there being no chance of grounding. The wire is fastened directly to the same screw that holds one side of the contact spring; pushing the button makes a contact on one screw only, thereby assuring a positive contact. Standard finish, satin brass. Standard package, 20.

Price, No. **604**, Bronx ....each **$.35**

No. 609 Edwards Bronx Push Buttons



Schedule E

This push button is of excellent construction and is well insulated. All-metal, one-piece type.

Standard finish is satin brass. Other finishes at increased prices.

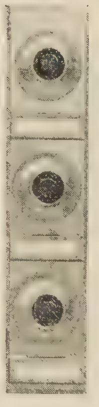
Size, 2x4½ inches.

Packed in individual boxes, with screws.

Standard package, 20. Weight, 8 pounds.

Price, No. **609**.....................................each **$.40**

No. 610 Edwards Bronx Pushes



Schedule E

This push is of the all-metal, one-piece type. It is of excellent construction, well insulated.

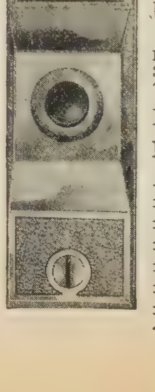
Packed, with screws, in individual boxes for convenient shelf use.

Standard finish is satin brass. For oxidized copper, add 5 cents each list. For all other commercial finishes, add 10 cents each to list. Satin brass and oxidized copper can be shipped from stock.

Size, 1$\frac{9}{16}$x6¾ inches. Standard package quantity, 10. Weight of standard package, 1 pound.

Price, No. **610** ....each **$1.75**

No. 650 Edwards 1-Piece Forged Brass Push Buttons



A solid forged brass push button.

Mechanism is securely riveted to solid brass case, making the push all one piece.

Entirely insulated and can be mounted on metal trim. Oval head brass wood screws, ¾-inch No. 6, are furnished.

Height, 3$\frac{3}{16}$ inches. Width, 1⅛ inches. Depth, ⅝ inches. Standard package, 10.

No. **650**, Standard Finish Brush Brass with Antique (Black) Mat......each **$1.10**
No. **650-A**, Polished Brass........each **1.15**
No. **650-B**, Verde Antique........each **1.20**
No. **650-C**, Bauer Barff (Black)...each **1.20**
No. **650-D**, Swedish Iron.........each **1.25**
No. **650-E**, Polished Bronze.......each **1.25**
No. **650-F**, Polished Copper......each **1.25**
No. **650-G**, Chromium...........each **1.75**

No. 9 Edwards Door Openers

Economy, Mortise Type, Solid Nose

Schedule T

Made of heavy pressed steel, heavily brass plated. Used extensively for apartments.

Fits same size mortise as same shape openers of other manufacturers. Width, 3⅝ inches; depth, 1¾ inches; thickness, 1 inch; nosing opening, 1³⁄₁₆ inches; face plate, 5⅞x1¼ inches.

Price includes No. 89 pushout spring.

May be used on either right or left hand doors. Regular resistance is two ohms.

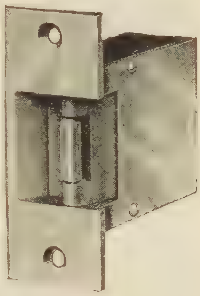
Special resistance up to 20 ohms, add to price $1.00; 21 to 50 ohms, $1.25; 51 to 75 ohms, $1.50.

Standard package, 50.

No. 9.......................................each **$3.00**

No. 154 Edwards Door Openers

Mortise Type, Roller Nose



This type is suitable for heavy doors. It requires a smaller mortise than the Economy.

Width, 2 inches; depth, 2⅞ inches; thickness, 1⅛ inches. Nosing opening, 1¼ inches. Face plate, 1¼x3⅜ inches. Brass finish.

Price includes No. 79 pushout spring.

Can be supplied with a release check permitting the use of door opener where air checks are employed; add to price, $2.00.

May be used on either right or left hand doors. Regular resistance is two ohms. Special resistance up to 20 ohms, add to price, $1.00; 21 to 50 ohms, $1.25; 51 to 75 ohms, $1.50. Standard package, 10.

Price, No. 154..............................each **$5.65**

No. 153 Edwards Door Openers

Plate Type, Roller Nose

Designed for doors too thin to take a mortise. Brass finish.

Width 1¼ inches. Depth 3⅞ inches. Nosing opening 1¼ inches. Face plate 1¼x 3⅜ inches. Side plate 3⅜x 2¾ inches.

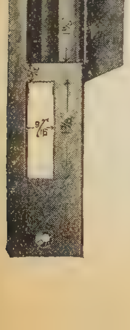
Price includes No. 79 Push-out Spring.

Standard package, 1.

Price, No. 153...............................each **$8.50**

No. 1541 Edwards Mortise Type Door Openers

Schedule E



Has roller nose. Face plate is extended to provide space for mortise for dead bolt.

When ordering, a sketch or template must be furnished to show exact location of dead bolt and screw holes. There cannot be less than ⁵⁄₁₆ inch space between nosing and dead bolt openings. If no sketch is sent, standard door opener, as illustrated, will be furnished.

Height, 2 inches; depth, 2⅞ inches; thickness, 1⅛ inches. Nosing opening, 1¼ inches; face plate, 1½x6⅜ inches.

Finish, brass.

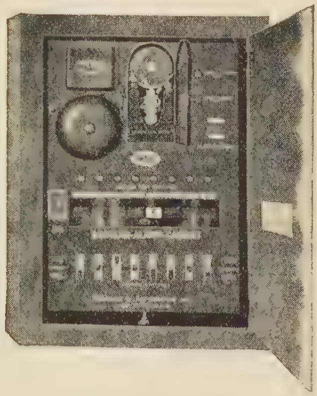
Standard package, 1. Weight, 1¼ pounds.

Price, No. 1541..................each **$10.30**

Faraday Control Cabinets for Burglar Alarm Systems

Surface Pattern

Schedule D



Cat. No. BO-373

Faraday Burglar Alarm Systems are in demand for private homes, country homes and estates and business establishments.

Faraday Burglar Alarm Control Cabinets are highly developed, scientific master-control units, performing functions that are invaluable for the protection of person and property.

Master control cabinets have, mounted on instrument panels, all the necessary relays, instruments, etc., to give an alarm by ringing bells, sounding sirens, etc., switching on interior lights (if so specified) floodlighting the outside of building or grounds, either in the entire protected area or any selected section thereof, etc.

At slight additional cost, relay control switches can be mounted on panel, so that by special arrangement with police department and telephone exchange, help may be automatically summoned.

Closed-circuit cabinets are furnished with electric-reset indicators.

Open-circuit cabinets are furnished with hand-reset indicators.

Standard finish: White enamel, golden oak, walnut or mahogany on steel will be furnished at no additional charge if so specified.

With Automatic Clock-Control

Cat. No. BC-25 Closed-Circuit Type with Electric-Reset Drops

No. of Sections	6	8	10	12
Cat. No. BC-25......each	$525.00	625.00	725.00	825.00
Add for Each Additional Section				$50.00

Cat. No. BO-373 Open-Circuit Type with Gravity Drops

No. of Sections	6	8	10	12
Cat. No. BO-373.....each	$300.00	330.00	360.00	390.00
Add for Each Additional Section				$15.00

Without Automatic Clock-Control

Cat. No. BC-250 Closed-Circuit Type with Electric-Reset Drops

No. of Sections	6	8	10	12
Cat. No. BC-250.....each	$270.00	340.00	410.00	480.00
Add for Each Additional Section				$30.00

Cat. No. BO-3730 Open-Circuit Type with Gravity Drops

No. of Sections	6	8	10	12
Cat. No. BO-3730....each	$190.00	220.00	250.00	280.00
Add for Each Additional Section				$15.00

For flush cabinets add 20 per cent to above lists.

In addition to the audible alarm which is regularly furnished, all of the above burglar alarm control cabinets can be furnished with relay control switches to close a 110-125-volt electric lighting circuit thereby lighting a number of incandescent lamps.

For 110-125-Volt Relay Maximum Capacity of Contactors **125** Watts, Add to List Price............ **$33.00**

For 110-125-Volt Relay Maximum Capacity of Contactors **500** Watts, Add to List Price............ **55.00**

For 110-125-Volt Relay Maximum Capacity of Contactors **1000** Watts, Add to List Price........... **80.00**

Edwards Burglar Alarm Springs

Schedule E

Window springs should be placed in the frame several inches above the lower end of the upper sash—and the same distance below the upper end of the lower sash. Each sash should be mortised so that the nosing of the spring will be set in the recess when the window is closed. The mortise should be continued (beyond the necessary point) to permit the opening of the window for ventilation. It is advisable (although not necessary) that this system of installation be followed. Without the mortise anyone trying to enter the house and knowing of the window springs can easily open the window gradually, and hold the spring depressed with the finger.

The Edwards Springs when used properly as described are classified as follows:

Open circuit window springs—nosing in normal position contact is broken.

Closed circuit window springs—nosing in normal position contact is established.

Open circuit door springs—plunger in normal position contact is established.

Closed circuit door springs—plunger in normal position contact is broken.

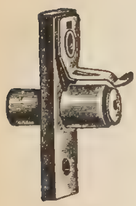
Open Circuit Springs

No. 28

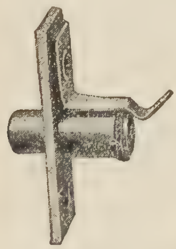
No. 30

No. 32

No.	Description	Size Plate Inches	Standard Package	Weight Pounds	Price Each
28	Window..........	2½x2½	50	2¾	**$.54**
30	Window......	3⅜x ⅝	50	5½	**.85**
32	Transom..........	2¼x1	25	3½	**1.55**



No. 34

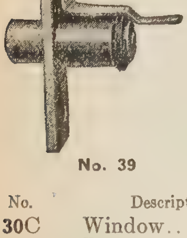


No. 38

No. 236

No.	Description	Size Plate Inches	Standard Package	Weight Pounds	Price Each
34	Door..................	2x⅝	50	3	**$.35**
38	Make and Break.......	2x⅝	50	3	**.46**
236	Door Trip.............	2x⅝	25	2	**1.03**

Closed Circuit Springs



No. 39

No. 42

No. 42A

No.	Description	Size Plate Inches	Standard Package	Weight Pounds	Price Each
30C	Window..........	3⅜x ⅝	50	5½	**$1.03**
39	Door............	2 x ⅝	50	3	**.46**
32C	Transom.........	2¼x1	50	3½	**1.95**
42	Safe (No Plate)..	....	50	2½	**.48**
42A	Plate for No. 42..	1¾x ¾	50	1¼	**.20**

Assortment of 100, all styles to make standard package.

Edwards Burglar Alarm Traps

Schedule E

Installed with cord or wire stretched across entrances, open spaces or attached to doors, windows, etc. Slightest movement of cord or wire operates trap which makes and holds contact causing continuous ringing of bell without additional devices.

Covered Type

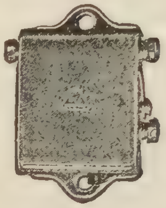
Standard package, 10. Can be assorted.
No. **27**, For Open Circuit.....each **$1.50**
No. **27-C**, For Closed Circuit.each **1.50**

Uncovered Type

Standard package, 20. Can be assorted.
No. **29**, For Open Circuit......each **$.36**
No. **29-C**, For Closed Circuit..each **.36**

Edwards Constant Ringing Drops

Schedule T



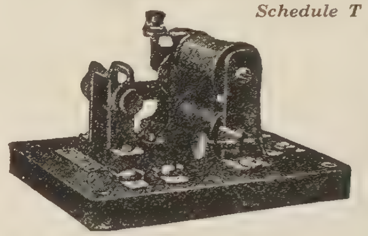
Especially designed for use in burglar alarm systems. With momentary closing of protective circuit this device causes bells to ring continuously, irrespective of subsequent opening of protective circuit. Plunger resets mechanism.

No. 26-B for ordinary use, 8-12 volts a.c., 6-8 volts d.c. No. 26-C recommended for battery systems where alarm may ring for several hours. Cuts own magnet out of circuit. Standard up to 24 volts a.c. or d.c. Standard package, 1.

No. 26-B....................each **$2.70**
No. 26-C....................each **2.70**

Edwards Burglar Alarm Relays

Schedule T



No. 1238 Open Type

For D.C. Only

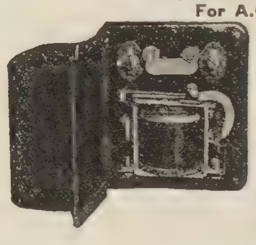
Adjustable for open or closed circuit operation. Pure hard drawn silver contacts. Contacts 1 ampere; 250 ohms recommended for closed circuit systems.

Standard package, 1.

20 Ohms....................................each **$6.00**
250 Ohms...................................each **7.00**
251 to **600** Ohms.........................each **8.00**

No. 1239 Enclosed Type

For A.C. or D.C.

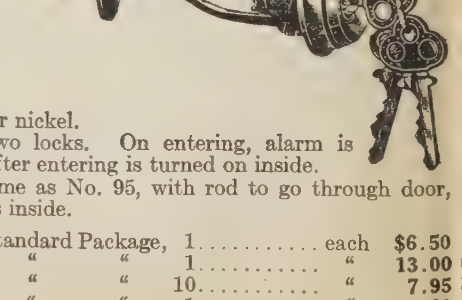


A small, compact, open or closed type as specified. Contacts 3 amperes 110 volts a.c., 6 amperes up to 48 volts d.c. Contacts 1 ampere, 110 volts d.c., 2 amperes up to 48 volts d.c.

Standard package, 1.

8–24 Volts...........each **$6.00**
25–48 Volts..........each **6.75**
110 Volts............each **8.00**

Edwards Burglar Alarm Lock Switches



No. 95.—Lock switches to be placed on the outside of the door so persons having key may enter without giving alarm. Polished brass or nickel.

No. 95A.—Two locks. On entering, alarm is turned off and after entering is turned on inside.

No. 95B.—Same as No. 95, with rod to go through door, fastened by nuts inside.

Price, No. **95**,	Standard Package,	1..........	each	**$6.50**
" " **95A**	" "	1..........	"	**13.00**
" " **95B**	" "	10..........	"	**7.95**
" Extra Keys,	" "	1..........	"	**.80**

Graybar Inter-Phone Systems

System No. 1

Selective Ringing—Selective Talking

For use in business organizations, industries, stores, institutions, etc., where frequently, more than one conversation will take place at the same time, and where instantaneous connections without loss of time are necessary.

By pressing a button each station can selectively ring and talk with any other station without disturbing the rest of the stations in the system and as many separate conversations can be carried on simultaneously as there are pairs of Inter-Phones. For example, in a system of six Inter-Phones, three conversations can be carried on at the same time.

For each station in the system, one push button key is required in each Inter-Phone.

Available in standard sizes of 6, 12, 16, 20, and 24 buttons; and in Nos. 1324 and 1355 Wall Type Inter-Phones, No. 6016 Desk Sets, and No. 6016HR Hand Sets.

Cable

For connections between the various stations, cable specially designed for Inter-Phones can be supplied. This cable includes the necessary number of wire conductors (two pairs for battery leads and one pair for each station in the system) and is furnished in three different types to suit various locations and conditions:

No. of Stations..........	6	12	16	20	24
No., Fireproof Braid....	134B	141B	157B	158B	136B
No., Brown Cotton Braid	155B	156B	.....	.....	.....
No., Lead Covered......	134B	141B	157B	158B	136B

These cables are listed in detail elsewhere.

Cable Terminals

A cable terminal should be used wherever a junction is to be made between cables. For example: Where an outside lead-covered cable is connected to an interior cable, or wherever a branch is taken off from the main cable. In cases where the cable can be run direct to the Inter-Phone, no cable terminal is necessary. The number of cable terminals required should be determined by the installer. For 6 and 12-button systems use the No. 19A cable terminals. For 16, 20 and 24-button systems use the No. 19B cable terminals.

Batteries

Not more than 12 dry cells will be necessary for operating the system. (Five cells for the talking circuit; 4 to 7 cells for the ringing circuit, depending upon length of line.)

A Recti-Filter may be used for battery supply.

No. 1324 Type Wall Inter-Phones

Surface Mounting

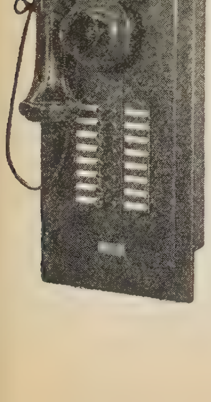
An all metal set having a hinged face plate, movable transmitter and hand receiver. The face being hinged, makes it possible to easily inspect all connections and apparatus without disturbing the installation.

Black with nickel trimmings.

Code No.	No. of Buttons	Height Inches	Width Inches	Depth Inches
1324C 6	6	10	6⅜	3
1324C-12	12	10	6⅜	3
1324C-16	16	14 5/16	7⅛	3
1324C-20	20	14 5/16	7⅛	3
1324C-24	24	14 5/16	7⅛	3

No. 1355 Type Wall Inter-Phones

Flush Mounting



A flush mounting set having a steel face plate on which is mounted all of the talking and signalling apparatus and a sheet steel outlet box arranged for ¾-inch conduit. The outlet box can be separated from the set and built into the wall during the construction of the building.

The face plate is hinged at the bottom, making all terminals easily accessible for installation or inspection.

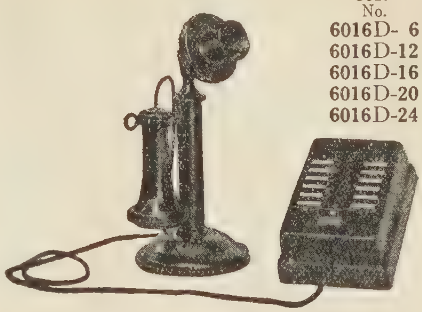
Dull black with nickel trimmings.

Code No.	No. of Buttons	Height Inches	Width Inches	Depth Inches
1355C-16	16	14½	6⅞	3⅜
1355C-20	20	14½	6⅞	3⅜
1355C-24	24	14½	6⅞	3⅜

Graybar Inter-Phones

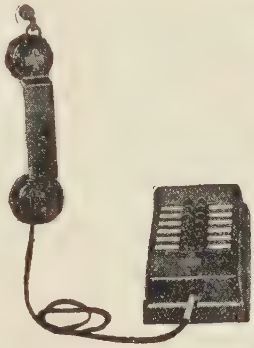
For System No. 1

No. 6016 Type Desk Set

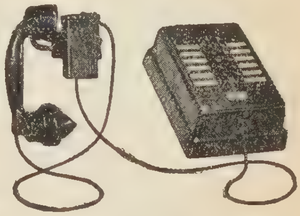


Code No.	No. of Buttons	Desk Stand	Cord Feet
6016D- 6	6	1140BE	5½
6016D-12	12	1140BE	5½
6016D-16	16	1140BE	5½
6016D-20	20	1140BE	5½
6016D-24	24	1140BE	5½

Hand Sets



No. 6016HR-12



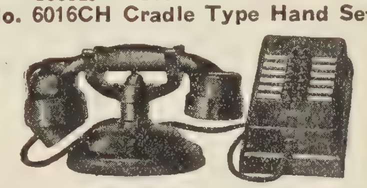
No. 6038C-12

The hand set is made of black molded Bakelite.

The switch-hook box can be installed on the side of the desk, on the wall, or any vertical surface.

No. 6016HR Type			No. 6038C Type		
Code No.	Hand Set	Hook	Code No.	Hand Set & Switch-Hook Box	No. of Buttons
6016HR- 6	1003R	141A	6038C- 6	1038C	6
6016HR-12	1003R	141A	6038C-12	1038C	12
6016HR-16	1003R	141A	6038C-16	1038C	16
6016HR-20	1003R	141A	6038C-20	1038C	20
6016HR-24	1003R	141A	6038C-24	1038C	24

No. 6016CH Cradle Type Hand Sets



The cradle or mounting for supporting this hand set consists of a metal base finished in black.

Code No.	No. of Buttons	Hand Set and Cradle	Cord Feet
6016CH- 6	6	1016CH	6
6016CH-12	12	1016CH	6
6016CH-16	16	1016CH	6
6016CH-20	20	1016CH	6
6016CH-24	24	1016CH	6

Key Box

The key box for these Inter-Phones is finished in dull black. Cable entrances are provided at bottom and ends of the box.

No..........	328C-6	328C-12	328C-16	328C-20	328C-24
Width.....in.	5	5	5¾	5¾	5¾
Length....in.	7½	7½	10¾	10¾	10¾
Depth.....in.	2⅝	2⅝	2⅝	2⅝	2⅝
Button Cap...	6	12	16	20	24

Stranded Flexible Cables

Usually connected between key box and cable terminal. Furnished with silk-covered, mercerized-covered, and common cotton braid. If key box is mounted in stationary position, standard lead or braided Inter-Phone cable should be used.

Cord Code No..................	416	428	436	444	452
No. Single Conductors..........	16	28	36	44	52
Used with Button Capacity......	6	12	16	20	24

Graybar Inter-Phone Outfits

Outfit No. 17

This outfit consists of two No. 1003 type hand sets with all material required to install a simple intercommunicating system between two points not over 80 feet apart, and where the wire will be wholly indoors and not exposed to weather conditions or moisture. The material, in addition to the hand sets, consists of two connecting blocks with mounting screws, 80 feet of insulated twisted pair copper wire, 60 insulated nails for fastening wire, two hooks for holding hand sets, two bells, two battery connectors and illustrated installing instructions.

Outfits Nos. 30 and 31

Outfit No. 30 includes two surface wall No. 2527C-1 Inter-Phones and one No. 51H retardation coil in one box, but no installing or wiring material.

Outfit No. 31 includes two hand set Type No. 6043P Inter-Phones and No. 51H retardation coil in one box, but no installing or wiring material.

Outfits Nos. 30A and 31A

These outfits are for use where the wiring is to be run entirely under cover and not exposed to moisture or weather.

They include No. 30 and No. 31 Outfit respectively in one box and installing material in another box.

The installing material consists of 75 feet of insulated 3-conductor copper wire, two battery connectors, insulated nails, and illustrated installing instructions.

Outfits Nos. 30B and 31B

Outfits Nos. 30B and 31B are for use where the wiring is to be run in the open between or outside of buildings, and exposed to weather and moisture.

They include No. 30 and No. 31 Outfits respectively in one box, and installing material in another box.

The wiring material consists of 150 feet of outside 3-conductor copper wire, two brackets with screws, hooks and knobs to attach wires to building, two porcelain tubes to insulate wires when entering building, two battery connectors, 25 insulated nails for fastening wires inside building, and illustrated installing instructions.

Graybar Inter-Phone Systems

System No. 11

Selective Ringing—Common Talking

For use where conversations can be limited to one at a time. Each Inter-Phone is equipped with a number of push buttons for calling each other station in the system.

The wall type Inter-Phones can be furnished in capacities of 2, 3, 4, 6 and 8 buttons, accommodating 3, 4, 5, 7 and 9 stations respectively in a system. The desk and hand set Inter-Phones are furnished in capacities of 4 and 8 buttons, accommodating 5 and 9 stations respectively in a system.

No. of Buttons	Wall Type		Cradle Set	Hand Set
	Surface	Flush		
2	2527C-2	2539C-2	.....	.....
3	2527C-3	2539C-3	.....	.....
4	2527C-4	2539C-4	6044C-4	6034AZ or BG
6	2527C-6	2539C-6	.....	.....
8	2527C-8	2539C-8	6044C-8	6034BB or BH

NOTE.—Sets described in detail on other pages.

Retardation Coil

A No. 51H retardation coil must be ordered separately for installation near the battery of each system.

Cables

Cable especially designed for connection between the various stations can be furnished. This cable includes three common wires and one individual wire for each station.

No. of Stations	3 & 4	6 & 8
Code No., with Fireproof Braid	161B	162B
Code No., with Brown Cotton Braid	142B	.....
Code No., with Lead Covering	161B	162B

Connecting Blocks

Where a junction is to be made between cables, or wherever a branch is taken off the main cable, a connecting block should be used. In cases where the cable can be run direct to the Inter-Phone, the connecting block is not required.

Batteries

Five dry cells are required for the operation of this system, when the distance between the two stations farthest apart is 750 feet or less, and Inter-Phone cable, listed above, is used. On lines of greater length it is recommended that instead of increasing the number of battery cells to more than 5, larger wire be used. A Recti-Filter can be furnished for the battery supply in place of dry cells.

Graybar Inter-Phone Systems

System No. 12

Master Station—Common Talking

Consists of one centrally located "Master Station" Inter-Phone to which are connected other "Outlying Station" Inter-Phones.

The Master Station Inter-Phone is equipped with a number of push buttons; one for each outlying station in the system.

Outlying stations are equipped with one button for ringing the master station.

Only one conversation can be carried on at a time.

Capacity, one Master Station and from 2 to 8 outlying stations.

Master Station

No. of Buttons	Metal Wall Type Inter-Phones		Cradle Set Inter-Phones	Hand Set Inter-Phones
	Surface	Flush		
2	2527C-2	2539C-2	.....	.....
3	2527C-3	2539C-3	.....	.....
4	2527C-4	2539C-4	6044C-4	6034AZ or BG
6	2527C-6	2539C-6	.....	.....
8	2527C-8	2539C-8	6044C-8	6034BB or BH

Outlying Stations

1	2527C-1	2539C-1	6044C-1	6042K
.	.....	.....	.....	*6042E
.	.....	.....	.....	6043E

*No. 6042E is same as No. 6242K, but without face plate and wall box. For details see listing elsewhere.

Accessories

Retardation Coil

A No. 51H retardation coil must be ordered separately with each master station Inter-Phone and installed near the battery of the system.

Wiring

For connections between the outlying stations and the master station either cable or insulated wires can be used, depending largely upon the layout of the system. Three common wires are required throughout the system, and in addition, one individual wire from the master to each outlying station. Where there is a long run of a large number of wires, it will be found economical to use cable, and at all distributing and junction points, to install connecting blocks. From these connecting blocks separate wires can be run to the Inter-Phones.

The sizes of cable and the number of connecting blocks required should be determined in accordance with the installation instructions.

Cables and connecting blocks are described elsewhere.

Batteries

Five dry cells are required for the operation of this system when the distance between the master station and most distant outlying station is 750 feet or less and No. 22 A.W.G. wire (as in the case of Graybar cable) is used.

On lines of greater length it is recommended that instead of increasing the number of battery cells to more than five, larger wire be used. This should be determined in accordance with the installation instructions.

A Recti-Filter may be used in place of batteries.

NOTE.—Detailed information covering wiring diagrams, connection of wires and cables, connecting blocks, etc., can be found in our booklet, "Installing and Maintaining Inter-Phones," which will be furnished upon request.

Graybar Inter-Phone Systems

Master Annunciator System Nos. 12A and 12AC

2-Way Ringing—Common Talking

Especially adapted for schools where the principal may call the teachers individually and the teachers can call the principal. Similar to the No. 12 system except that the master station includes an annunciator for identifying the calls from the outlying stations.

Only one conversation can be carried on at a time.

Capacity, one master station and 3 up to 20 or more outlying stations.

System No. 12A

The master station Inter-Phone includes a push button block having as many buttons as there are outlying stations, also one extra button for electrically resetting the annunciator drops.

Each outlying station Inter-Phone is equipped with a push button which signals the master station. This call will also be registered at the master station by the operation of the annunciator drop.

Master Station

No. of Classroom Stations	Group Code No.	Group Code No. Consists of: *Push Button Block No.	Cradle Set No.	Cable Terminal No.	Annunciator Code No. †Surface	†Flush
8	8A	9030C	6044C-0	19A	403- 8	409- 8
10	10A	9032C	6044C-0	19A	403-10	409-10
12	12A	9034C	6044C-0	19A	403-12	409-12
14	14A	9036C	6044C-0	19A	403-14	409-14
16	16A	9038C	6044C-0	19A	403-16	409-16
18	18A	9040C	6044C-0	19A	403-18	409-18

Outlying Stations

No. of Buttons	Metal Wall Type Surface	Flush	Hand Set Type Cradle	Surface	Flush
1	2527C-1	2539C-1	6044C-1	6043E	6042K
..	.....	.....	.....	.....	‡6042E

System No. 12AC

System No. 12AC differs from System No. 12A in that a ring-all button is furnished in the push button block at the principal's station. This button will ring all stations simultaneously for school period purposes and for fire drills.

Master Station

No. of Classroom Stations	Group Code No.	Group Code No. Consists of: *Push Button Block No.	Cradle Set No.	Cable Terminal No.	Annunciator Code No. †Surface	†Flush
10	10AC	9072C	6044C-0	19A	403C-10	409C-10
12	12AC	9074C	6044C-0	19A	403C-12	409C-12
14	14AC	9076C	6044C-0	19B	403C-14	409C-14
16	16AC	9078C	6044C-0	19B	403C-16	409C-16
20	20AC	9082C	6044C-0	19B	403C-20	409C-20
24	24AC	9086C	6044C-0	19B	403C-24	409C-24
26	26AC	9090C	6044C-0	2-19A	403C-26	409C-26
30	30AC	9094C	6044C-0	1-19A, 1-19B	403C-30	409C-30

Outlying Stations

Wall type sets only, equipped with 24-volt ringers.

No. of Buttons 1
Code No., Surface Mounting 2527AC-1
Code No., Flush Mounting 2539AC-1

*The push-button block includes a 6-foot connecting cord.

†No. 403 Type furnished unless otherwise specified.

‡No. 6042E is same as No. 6042K, but without face plate and wall box.

Accessories

Retardation Coil

A No. 51H retardation coil must be ordered separately for installation near the battery of each system.

Wiring and Battery Requirements

Two wires common to all stations in the system and two individual wires for each outlying station.

System No. 12A requires a battery of five dry cells, connected in series, to furnish current for ringing and talking.

System No. 12AC requires a battery of dry cells or storage batteries to total 24 volts may be used for the ringing and talking battery supply.

Graybar Inter-Phone Systems

Master Annunciator Systems Nos. 12B and 12C

1-Way or 2-Way Ringing—Common Talking

Provides for communication between a master station annunciator and a number of outlying stations.

The master annunciator is equipped with a hand set Inter-Phone, and can be obtained with or without push buttons.

System No. 12B—1-Way Ringing

The annunciator is without push buttons, enabling the outlying stations to ring the master station but the master station cannot ring the outlying stations.

System No. 12C—2-Way Ringing

The annunciator is equipped with push buttons, one for each outlying station, enabling the outlying stations to ring the master station and the master station to ring the outlying stations individually.

Master Station Annunciators

Code Nos. For No. 12B	For No. 12C	No. of Drops	Code Nos. For No. 12B	For No. 12C	No. of Drops
1204B	1204C	4	1216B	1216C	16
1206B	1206C	6	1220B	1220C	20
1208B	1208C	8	1224B	1224C	24
1210B	1210C	10	1230B	1230C	30
1212B	1212C	12	.....	.....	..

A No. 1003D Hand Set must be ordered separately with each annunciator. This set is equipped with a 3-foot cord, and can be hung on the hook on the side of the annunciator.

Accessories

Wiring

For System No. 12B one wire, common to all stations in the system, and in addition, one individual wire from the master station to each outlying station.

For System No. 12C one wire, common to all stations in the systems, also two individual wires from the master station to each outlying station.

Batteries

Only one battery is required for the operation of the system. This should consist of three or four dry cells, where the distance between the master station and the farthest outlying station is 250 feet or less, and No. 22 A.W.G. copper wire is used. On lines of greater length it is recommended that instead of increasing the number of dry cells to more than four, larger wires be used.

A Recti-Filter may be used in place of batteries.

System No. 14

2-Station Private Line

For use where only two stations are required and where the sets are distantly located from each other.

Either station can ring the other.

No. of Buttons	Metal Wall Type Surface	Flush	Desk Sets	Hand Sets Surface	Flush
1	2527C-1	2539C-1	6044B-1	6043P	6042AE
.....	.....	.....	.....	.....	*6042AF

*No. 6042AF is same as No. 6042AE but without face plate and wall box.

Wiring and Battery Requirements

Only two wires are used for connecting the Inter-Phones.

A battery of three dry cells is required at each station to furnish current for talking and ringing if the length of line is less than 750 feet. If the length of the line is increased, additional dry cells are required at each station to insure satisfactory ringing. The following list indicates the additional dry cells required at each station:

Length of Line Between Stations	Additional Number of Cells For Each Station A.W.G. Copper Wire No. 12	No. 14	No. 16	No. 18
750 to 1000 ft.	1	1	1	2
1000 to 1500 ft.	1	1	1	3
1500 to 2000 ft.	1	2	3	.
3000 to 4000 ft.	2	3	..	.
4000 to 5000 ft.	2	..	..	..
5000 to 6000 ft.	3	..	..	..

Graybar Inter-Phone Systems

System No. 15

Code Ringing—Common Talking

A simple and inexpensive system for small residences, warehouses, or stores where only a few stations are required.

Only one conversation can be carried on at a time.

Each station is equipped with one push button which rings the bells at all the other stations.

The various stations are called by signalling each one with a different code ring; for instance, two rings for Station No. 2, three rings for Station No. 3, etc. If more than 6 stations are in service, signalling code mistakes are likely to occur. System No. 11 is recommended where the initial installation comprises more than 4 or 6 stations.

No. of Buttons	Metal Wall Type Surface	Metal Wall Type Flush	Desk Sets	Hand Sets Surface	Hand Sets Flush
1	2527C-1	2539C-1	6044D-1	6043CD	6042CD

Accessories

A No. 51H retardation coil must be ordered separately and installed near the battery of the system.

Four wires are required for connecting the Inter-Phones.

Five dry cells are required for the operation when the length of the line is 750 feet or less, and not more than four stations are to be used, connected by Nos. 20 or 22 A.W.G. copper wire. If more than four Inter-Phones are required or if the line is longer than 750 feet, larger wires should be used in accordance with installation instructions.

Master Annunciator System No. 18C

Non-Interfering

Provides for communication between a central or master station and a larger number of outlying stations, as follows:

The master station can selectively ring and talk with any of the outlying stations and the outlying stations can call the master station annunciator.

Communication can be arranged between any two outlying stations through the medium of one or two connecting cords at the master station.

No connection can be made between this system and a public telephone system.

An annunciator supervisory feature is provided to indicate the termination of a conversation between the outlying stations. Where a large number of connections are required between outlying stations, the lamp signal, Private Exchange Switchboard for surface or flush mounting, is recommended.

Master Station Annunciators

Annunciators regularly equipped with answering cord only. If inter-communication between outlying stations is desired, one or two pairs of connecting cords may be ordered.

A No. 1003K Hand Set must be ordered separately with each annunciator.

Code No.	No. Drops & Jacks	Ht. In.	Wdth. In.	Dpth. In.	Code No.	No. Drops & Jacks	Ht. In.	Wdth. In.	Dpth. In.
1810-C	10	15⅛	11¼	5¼	1849-C	49	23¾	23¼	5¼
1814-C	14	15⅛	14¼	5¼	1856-C	56	23¾	24¾	5¼
1816-C	16	15⅛	17¼	5¼	1864-C	64	28⅛	23¼	5¼
1820-C	20	15⅛	18¾	5¼	1872-C	72	28⅛	26¼	5¼
1825-C	25	19⅜	17¼	5¼	1881-C	81	32⅜	24¾	5¼
1830-C	30	19⅜	18¾	5¼	1890-C	90	32⅜	26¼	5¼
1836-C	36	19⅜	21¾	5¼	1900-C	100	32⅜	29¼	5¼
1842-C	42	23¾	20¼	5¼	......	...	....	....	...

Outlying Stations

No. of Buttons	Metal Wall Type Surface	Metal Wall Type Flush	Hand Sets Surface	Hand Sets Flush
1	2527C-1	2539C-1	6043D	6042D
..	....	....	......	*6042M

*Same as No. 6042D, but with face plate and wall box.

Accessories

One wire, common to all stations in the system is required, and, in addition, two individual wires between the master and each outlying station. Where there is a long run of a large number of wires, it will be found economical to use cable and install cable terminals or connecting blocks at all distributing and junction points. From there, the installation can be continued by means of separate wires to the various outlying stations.

Five or more dry cells are required for operating the system. A Recti-Filter may be used in place of batteries.

Graybar Inter-Phones

Description of Metal Wall Type No. 2527C, Surface Mounting

No. 2527C-4

The No. 2527C Type Inter-Phone has a surface mounting metal housing which contains all of the talking and signalling apparatus, also a metal backboard, which is furnished for mounting the set to the wall.

The housing of the set is of rugged construction, beingformed of sheet steel and is equipped with hinge hooks which match up with slots in the base of the metal backboard. This arrangement permits fastening the backboard in place on the wall and then mounting the housing unit to it.

The hinge arrangement of this set enables the installer to swing down the housing unit from the backboard for making connections to the terminals; also to permit interior inspection of the set at any time after its installation.

The metal backboard is designed to permit the entrance of wires or cabling from either the top, bottom or center of the set; also, a metal guide ring is located near the cable entrance at the base of the backboard so that the connecting wires may be looped through this ring to hold them in place and provide a proper bending point when the housing is swung forward.

Durable dull black enamel finish with nickel trimmings.

Code No.	No. of Buttons	For Systems	Dimen. Housing, Inches Height	Width	Depth
2527C-0	0	20 and 21	7½	5	2⅝
2527C-1	1	12, 14, 15, 18, 20 and 21	7½	5	2⅝
2527C-2	2	20 and 21	7½	5	2⅝
2527C-3	3	11, 12, 20 and 21	7½	5	2⅝
2527C-4	4	11, 12, 20 and 21	7½	5	2⅝
2527C-6	6	11, 12, 20 and 21	7½	5	2⅝
2527C-8	8	11, 12, 20 and 21	7½	5	2⅝

No. 2539C, Flush Mounting

No. 2539C-2

The No. 2539C Type Inter-Phone has a flush steel face plate on which is mounted all of the talking and signalling apparatus, also a metal outlet box which is furnished for mounting the set in the wall.

The outlet box is of unique design in that metal aligning strips are fastened at the top and bottom front of the box so as to properly align the set after the face plate unit is fastened to the outlet box (in case the outlet box is installed out of plumb). It is equipped with adjustable ears for mounting it in the wall, the same as are furnished on standard sectional outlet boxes. Knockouts are provided at both the top and bottom for the entrance of ½-inch conduit or connecting wires.

The face plate support for installer is an added feature of this set, consisting of a wire hook mounted on a small card with printed instructions for its use. This hook is for temporarily supporting the Inter-Phone face plate, of flush type sets, during installation, so that the wires may be readily connected to the terminals by the installer.

Durable dull black enamel finish with nickel trimmings.

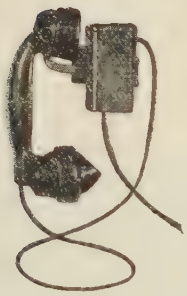
Code No.	No. of Buttons	For Systems	Dimensions, Inches — Face Plate Height	Face Plate Width	Outlet Box Height	Outlet Box Width	Outlet Box Depth
2539C-0	0	20	9	5$\frac{5}{16}$	7½	4	2$\frac{5}{16}$
2539C-1	1	12, 14, 15, 18 and 20	9	5$\frac{5}{16}$	7½	4	2$\frac{5}{16}$
2539C-2	2	20	9	5$\frac{5}{16}$	7½	4	2$\frac{5}{16}$
2539C-3	3	11, 12, and 20	9	5$\frac{5}{16}$	7½	4	2$\frac{5}{16}$
2539C-4	4	11 and 12	9	5$\frac{5}{16}$	7½	4	2$\frac{5}{16}$
2539C-6	6	11 and 12	9	5$\frac{5}{16}$	7½	4	2$\frac{5}{16}$
2539C-8	8	11 and 12	9	5$\frac{5}{16}$	7½	4	2$\frac{5}{16}$

Graybar Inter-Phones

Description of Hand Sets

Selective Ringing—Common Talking

No. 6038 Type



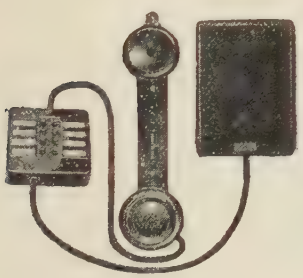
This hand set unit was designed for installation at the side of a desk, on the wall, or any vertical surface. The set may be installed at one end, side or in the alcove of the desk; also recommended for residential purposes for mounting at the bedside, either on the bed or on the wall within reach of the bed.

Made of Bakelite, reinforced.

The switch-hook box contains a switch-hook unit for holding the hand set in place. This hook operates on the same principle as the standard telephone hook. A 4-foot cord connects the hand set to the switch-hook box.

		Composed of				
Code No.	No. of Buttons	Hand Set & Switch Box	Connecting Block	Push Button Block	Apparatus Box	For Use In System
6038A	0	1038A	2 No. 11A	.....	....	1801P.B.X.
6038B-1	1	1038B-1	12E	.....	....	14 and 15C
6038C-1	1	1038C-1	2 No. 11A	.....	....	12
6038C-4	4	1038CB	.....	104AC	35B	11 and 12
6038C-8	8	1038CB	.....	108AC	35B	11 and 12

No. 6034 Type



		Composed of						
Code No.	No. of Buttons	Hand Set Code No.	Cord Ft.	Push Button Block	Apparatus Box	Connecting Block	Bell No.	For Use In System
6034BG	4	1003AD	6	104AC	35B	...	....	11 & 12
6034AZ	4	1003AD	6	104AC	....	8G	11B	11 & 12
6034BH	8	1003AD	6	108AC	35B	...	....	11 & 12
6034BB	8	1003AD	6	108AC	....	8H	11B	11 & 12

Graybar Inter-Phones

Description of Hand Sets

Selective Ringing—Common Talking

The Inter-Phone transmitter and receiver are a part of the hand set. A bar marked Press to Talk mounted in the hand set handle is held down by the natural position of the hand while talking. When not in use, the hand set can be hung on a hook or laid down in any position.

Finished in dull black.

No. 6043, Surface Mounting

Surface Mounting Apparatus Units (No. 383 Type) are equipped with an insulated base, black finished round metal cover and nickel hook.

Approximate size, $3\frac{1}{16}$ inches in diameter by $1\frac{5}{16}$ inches deep.

		Hand Set		Apparatus	
Code No.	No. of Buttons	Code No.	Cord Feet	Box	For Use in System
6043E	1	1003J	3	383J	12 & 12A
6043D	1	1003E	3	383J	12B & 18C
6043P	1	1003AB	3	383J	14 & 15C
6043R	0	1003AC	3	383H	*1801P.B.X.

*For use in systems A and B only of 1801 P.B.X.

No. 6042, Flush Mounting

Flush Mounting Apparatus Boxes (No. 382 Type) are intended to be set in the wall and are equipped with a brush brass finished face plate. These boxes consist of three parts —a Gem A Union sectional switchbox, an apparatus unit, and a face plate. The face plate is $4\frac{1}{2}$x$2\frac{3}{4}$ inches; the wall box, 2x3x3 inches deep.

An important point to be observed is that wall box and face plate are the same as those used in electric light wiring for push button switches. Sets furnished either complete, including wall box and face plate, or minus these parts.

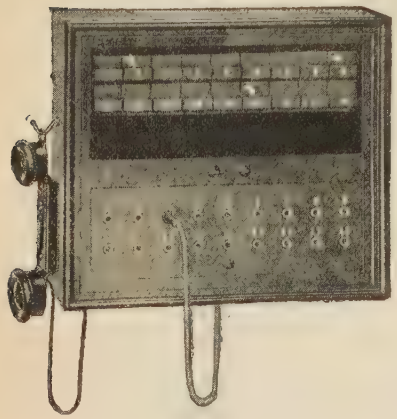
		Hand Set		Apparatus (Flush Type)			
Code No.	No. of Buttons	Code No.	Cord Ft.	Code No.	Switchbox	Face Plate No.	For Systems
6042E	1	*1003G	3	382E	.....	.....	12 & 12A
6042K	1	*1003G	3	382EB	Gem A	12007	12 & 12A
6042D	1	1003K	3	382J	.....	.....	12B & 18C
6042M	1	1003K	3	382JB	Gem A	12007	12B & 18C
6042AE	1	1003AA	3	382JB	.....	.....	14 & 15C
6042AF	1	1003AA	3	382J	Gem A	12007	14 & 15C

*Hand set cord equipped with plug.

Graybar Inter-Phones

Description of Annunciators

For Systems 18C, 20J, and 21J



For System 18C

No. of Drops	System 18C List No.	Systems 20J & 21J List No.	No. of Drops	System 18C List No.	Systems 20J & 21J List No.
10	1810C	2010	49	1849C	2049
14	1814C	....	56	1856C	2056
16	1816C	2016	64	1864C	2064
20	1820C	2020	72	1872C	2072
25	1825C	2025	81	1881C	2081
30	1830C	2030	90	1890C	2090
36	1836C	2036	100	1900C	2100
42	1842C	2042	...	.....	....

Larger sizes furnished on order.

No. 18C system annunciators equipped with answering cord only. No connecting cords furnished unless ordered separately.

For Systems 22D and 22G

No. of Drops	System 22D List No.	System 22G List No.	For No. of Sections	*No. of Calling Buttons	No. Jack and Door Buttons
2	2202D	2202G	2	12	2
3	2203D	2203G	3	18	3
4	2204D	2204G	4	24	4
5	2205D	2205G	5	30	5
6	2206D	2206G	6	36	6

*For System 22G only.

Larger sizes furnished on order.

For System 22J

No. of Drops	List No.	For No. of Sections	No. of Calling Buttons	No. Jack and Door Buttons
12	2202J	2	12	2
18	2203J	3	18	3
24	2204J	4	24	4
30	2205J	5	30	5
36	2206J	6	36	6

Larger sizes furnished on order.

Hand Set Inter-Phones for Annunciators

Annunciators do not include the hand sets which must be ordered separately.

Order No. 1003K hand set for Systems 18C, 20J, and 21J, and for Systems 22D, G, and J.

Graybar Inter-Phones

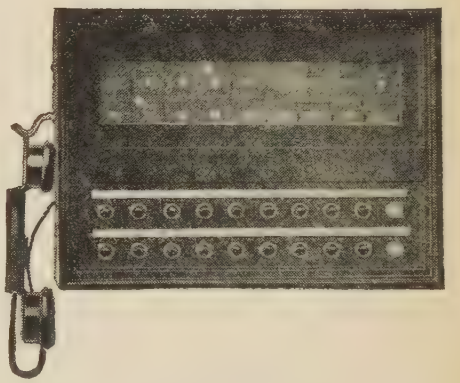
Description of Annunciators

These annunciators are equipped with electric reset drops. The drop indication is a white arrow which points directly at the name card. When reset, the arrow drops out of view behind the name card.

The front of the annunciator protecting the drops is plain glass and as the arrow is between the glass and the dull black background, it can be easily seen from any angle.

For Systems Nos. 12A, 12B, and 12C

No. 403



No. 1204C to 1230C

No. of Drops	System 12A, Surface	List No. Flush	System 12B List No.	System 12C List No.
4	.....	.....	1204B	1204C
6	.....	.....	1206B	1206C
8	403– 8	409– 8	1208B	1208C
10	403–10	409–10	1210B	1210C
12	403–12	409–12	1212B	1212C
16	403–16	409–16	1216B	1216C
18	403–18	409–18	.....	.....
20	.....	.....	1220B	1220C
24	.....	.....	1224B	1224C
30	.....	.....	1230B	1230C

Larger sizes furnished on order.

Hand Set Inter-Phones for Annunciators

No. 1003D hand set must be ordered separately for Systems 12B and 12C annunciators.

Graybar Apartment House Inter-Phones

System No. 21

Selective Ringing—Common Talking

No. 1524-E Loud Speaking Vestibule Set

Systems No. 21A, D, E, G, H, and J

No. 1524-E & F

Eliminates, as far as possible, all projecting and removable parts, such as the transmitter, receiver and switch-hook. Also safeguards theft of receiver and the cords.

The set consists of a flush mounting face plate. A push button is mounted at the bottom of the plate for talking and listening purposes.

Bronze brass finish.

Face plate, 5x16½ inches.

Equipped with a janitor call button.

To call one of the apartments from the vestibule, the push button (under the name of the party wanted) is pressed, which rings the bell of that apartment. The vestibule party next depresses the talking button at the bottom of the telephone set, and keeps it depressed while awaiting reply, and while conversing with the apartment party.

Only one conversation can be carried on at a time.

Battery Requirements

For the operation of each system three sets of dry batteries are required, each set to consist of three dry cells.

System No. 21A

Vestibule can call apartments; apartments can open door.

System No. 21D

Vestibule can call apartments and janitor; apartments can open door and call janitor.

System No. 21E

Vestibule can call apartments and janitor; apartments can open door and call janitor and laundry.

System No. 21G

Vestibule can call apartments and janitor; apartments can open door and call janitor; and janitor can call apartments.

System No. 21H

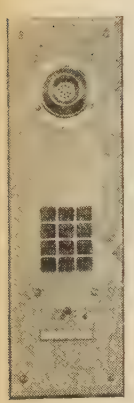
Vestibule can call apartments and janitor; apartments can open door and call janitor and laundry; janitor and laundry can call apartments.

System No. 21J

Vestibule can call apartments and janitor; apartments can open door and call janitor; and janitor can call apartments.

No. 1524-F Loud Speaking Vestibule Set

Systems No. 21AR, DR, and GR



No. 1524-F

These systems operate as described for the No. 1524-E except a relay is furnished in the vestibule set for closing the talking circuit when a receiver is removed from the hook at a suite station. This replaces the talking button described for the No. 1524-E.

System No. 21AR

Vestibule can call apartments; apartments can open door.

System No. 21DR

Vestibule can call apartments and janitor; apartments can open door and call janitor.

System No. 21GR

Vestibule can call apartments and janitor; apartments can open door and call janitor; and janitor can call apartments.

Graybar Apartment House Inter-Phones

System No. 20

Selective Ringing—Common Talking

No. 1520-R

No. 424-A
Push Button Plate

The No. 20 Inter-Phone Systems are designed to provide an inexpensive and reliable means of communication between vestibule, apartments, janitor's quarters, laundry, and tradesmen's entrance.

There are six combinations of the No. 20 System, differing from each other in the number of locations in the apartments which are to be connected for inter-communicating service.

Only one conversation can be carried on at a time.

No. 1520-R Vestibule Inter-Phones

With Armored Receiver Cord

The No. 1520-R Inter-Phone consists of a flush mounting brush brass finish face plate with a push-button for signalling the janitor.

Battery Requirements

For the operation of each system a battery of not more than five dry cells is required. These can be placed in the basement or any other accessible place.

System No. 20A

Vestibule can call apartments; apartments can open the door.

System No. 20D

Vestibule can call apartments and janitor; apartments can open the door and call the janitor.

System No. 20E

Vestibule can call apartments and janitor; apartments can open the door and call janitor and laundry.

System No. 20G

Vestibule can call apartments and janitor; apartments can open the door and call janitor; and janitor can call apartments.

System No. 20H

Vestibule can call apartments and janitor; apartments can open the door and call janitor and laundry; and janitor and laundry can call apartments.

System No. 20J

Vestibule can call apartments and janitor; apartments can open the door and call janitor; and janitor can call apartments.

Graybar Vestibule Push-Button Plates

Designed to mount on either side of the vestibule Inter-Phone. A card holder is provided opposite each button. Push button plates can be obtained in two different sizes.

Code No.	No. of Buttons	Face Plate Inches	Code No.	No. of Buttons	Face Plate Inches
400A	..	5x16$\frac{1}{2}$	**416A**	16	5x16$\frac{1}{2}$
406A	6	5x16$\frac{1}{2}$	**420A**	20	5x16$\frac{1}{2}$
412A	12	5x16$\frac{1}{2}$	**424A**	24	5x16$\frac{1}{2}$

Graybar Vestibule Mail Boxes

Mail boxes may be obtained in groups of 3 to 8, being assembled complete in units and master-locked for mounting in single or double rows.

Finished in bronze, other finishes being considered special.

The overall dimensions of the individual letter boxes are 5 inches in width and 16$\frac{1}{2}$ inches in height.

Code, No., Double and Single Row....	**3003**	**3004**	**3005**	**3006**	**3007**	**3008**
No. of Boxes, Single Row...............	3	4	5	6	7	8

Graybar Inter-Phone Accessories

For Use with Inter-Phone Systems Nos. 12A, 20G and 20H, Private Installations and Call Bell Service

Wood Push Button Blocks

These are regular desk type push button blocks in various button capacities for general signalling purposes such as call bell service and for use in connection with desk type Inter-Phones.

Regular Wood Base Without Cord Eyelet

Code Nos. Without Cord	Code Nos. With Cord	No. of Buttons	Code Nos. Without Cord	Code Nos. With Cord	No. of Buttons
9004	9004C	4	**9012**	9012C	12
9006	9006C	6	**9016**	9016C	16
9008	9008C	8	**9020**	9020C	20

Weighted Base With 1 Cord Eyelet

Code Nos. Without Cord	Code Nos. With Cord	No. of Buttons	Code Nos. Without Cord	Code Nos. With Cord	No. of Buttons
9024	9024C	4	**9032**	9032C	12
9026	9026C	6	**9036**	9036C	16
9028	9028C	8	**9040**	9040C	20

Metal Push Button Blocks

A black finished metal box, bushed for entrance of connecting cord or wires. Base plate has 2 punched holes for mounting if desired. Felt pads are attached to bottom of plate. Size of box, 3$\frac{3}{4}$x4$\frac{1}{4}$x1$\frac{3}{8}$ in.

Without Cords

Code No.	No. of Buttons	Code No.	No. of Buttons
101A	1	104A	4
102A	2	106A	6
103A	3	108A	8

With 6-Foot Length Cords

Code No.	No. of Buttons	Code No.	No. of Buttons
104AC	4	108AC	8

Graybar Inter-Phone Accessories

For Use with Inter-Phone Systems Nos. 12A, 20G and 20H, Private Installations and Call Bell Service

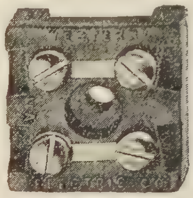
Continued

No. 8 Type Connecting Blocks

Consists of bridge type connectors, mounted on a black finished maple base, equipped with a screw eye for fastening stay cord.

Code No.	No. of Terminals	Dimensions, Inches: Length	Width	Depth
8G	8	5$\frac{5}{8}$	1$\frac{3}{8}$	$\frac{5}{8}$
8H	12	8$\frac{1}{8}$	1$\frac{3}{8}$	$\frac{5}{8}$

Nos. 11 and 12 Type Connecting Blocks



No. 11A

These consist of a composition base in which the screw terminals are embedded. Each terminal consists of 2 screw bushings electrically connected by means of a metal strip, and provided with screws and washers.

Code No.	No. of Terminals	Size In.	Code No.	No. of Terminals	Size In.
11A	2	1$\frac{1}{8}$x1$\frac{5}{32}$	12E	3	1$\frac{11}{16}$x1$\frac{5}{32}$
*11B	2	1$\frac{1}{8}$x1$\frac{5}{32}$	*12F	3	1$\frac{11}{16}$x1$\frac{5}{32}$

*Equipped with a cover.

No. 30 Type Connecting Blocks

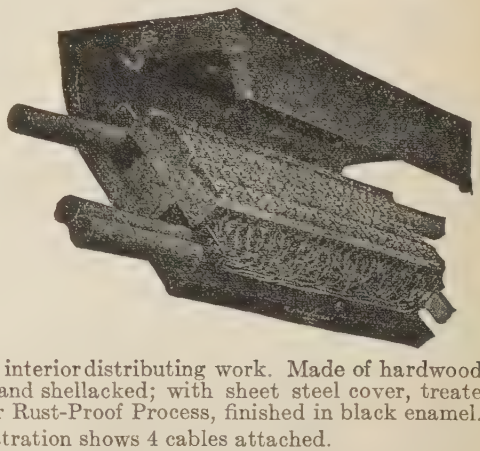
These consist of brass studs embedded in a hard composition base. Studs fitted with 2 nuts (one a split check nut) and 2 washers.

Code No.	Capacity in Pairs	Dimensions, Inches: Length	Height	Width
30A	6	4 $\frac{3}{16}$	1$\frac{3}{16}$	1[illegible]
30B	11	7 $\frac{5}{16}$	1$\frac{3}{16}$	1[illegible]
30C	16	10 $\frac{7}{16}$	1$\frac{3}{16}$	1[illegible]
30D	26	16$\frac{11}{16}$	1$\frac{3}{16}$	1[illegible]

No. 141A Hand Set Hooks

A hook to be screwed into wall for holding No. 1003 type hand set.

No. 19 Type Cable Terminals



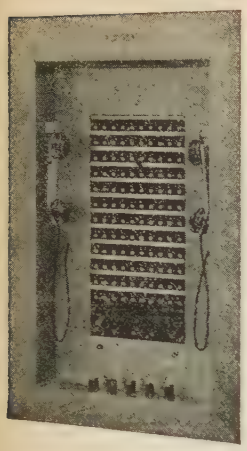
For interior distributing work. Made of hardwood, numbered and shellacked; with sheet steel cover, treated with Parker Rust-Proof Process, finished in black enamel.

Illustration shows 4 cables attached.

Code No.	Capacity in Pairs	Dimensions, Inches: Length	Width	Depth
19A	14	8	5$\frac{7}{8}$	2$\frac{1}{2}$
19B	26	14	5$\frac{7}{8}$	2$\frac{1}{2}$

Graybar Inter-Phone Switchboards

Nos. 108 and 109 Flush Wall Type



Construction

The cabinet consists of birch woodwork fitted with either a wood or metal mat framing. The finish of the wood to be oak, mahogany, or walnut; the metal, bronze finished to match sample submitted.

The lamp and jack strips are mounted in face of the switchboard on a panel which is hinged, to give complete access to interior of the switchboard.

The recessed portion, including the front panel door and the plug shelf, is covered with black formica.

Cord Circuit Equipment

The cross-connecting cords are supervised through a single lamp circuit. These lamps are located over the key position. The single cam type ringing and listening key for each cord position is located on the face of the board.

Lamp and Jack Equipment

The line lamp and jack equipment is mounted 10 per strip with associated designation strips.

Night Alarm

All calls at the switchboard may be received through a buzzer signal by the operation of a push button key.

Battery Switch

A push button control is provided for disconnecting the battery from the switchboard when required.

Operator's Telephone Set

An all metal hand set which hangs at the left-hand side of the board and is suspended by means of a hook support, and connected with a suitable cord length.

Cable Termination

Cable termination at the back of the switchboard will be at the selection of the customer. It is recommended that suitable cable lengths (up to 15 feet) be provided instead of a cable terminal which is usually fastened at the back of the board. These cable lengths consist of 20 pair size lead covered cables, one end terminating to the switchboard line lamp and jack connections and the other end tagged to enable the installer to make proper terminal connections to the cable terminal box. This method eliminates duplicate cable terminating points by omitting the terminal block at the switchboard.

The proper length of cable must be specified. If it is not possible to locate the cable terminal box within suitable distance of the switchboard, terminal strips will be furnished at back of board for terminating the lines.

Extension Telephone

An extension telephone consisting of an all metal hand set will be furnished when specified. This permits visitors or employees to communicate directly with an apartment without interfering with the regular operator's service. For this purpose a jack is provided at the right hand side of the board near the hand set which is supported on a hook, in the same manner as the operator's telephone.

Grilled Doors

The switchboard may be fully concealed from view by means of a fancy grilled door, made of bronze and finished to match the metal trim of any interior.

Lighting Fixtures

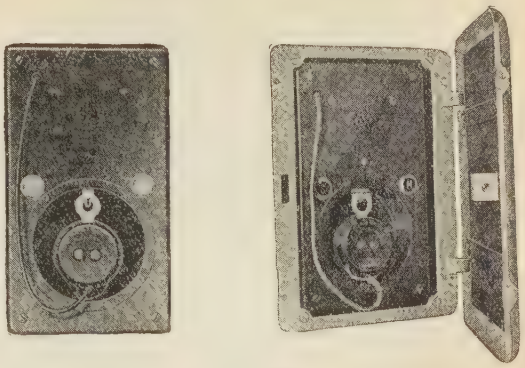
Lighting fixtures are not ordinarily provided for illuminating the face of the switchboard, however special fixtures mounted separately from the switchboard can be provided when the board is mounted in a dark location.

Further Information

Detailed information, covering types of switchboards, dimensions, wiring diagrams, accessories, etc., can be found in our Booklet GBT-86 which will be furnished upon request.

Graybar Inter-Phones

Elevator Inter-Phone Service



No. D-1640

An elevator Inter-Phone system provides for communication between the elevator starter and each elevator cab, also between the elevator starter, the engineer, the superintendent, the machine room, etc., depending upon the total number of master and outlying stations to be installed.

The elevator cab Inter-Phone D-1640 is designed to mount in back of the Underwriters' building certificate frame, which in a number of cases is required by law. This frame is hinged to a metal outlet box so that the cab operator has access to the Inter-Phone through this door. The set is compact, is concealed, has no projecting parts, and the exterior frame may be designed to match the trim of the cab in which it is installed.

The D-1640 Inter-Phone Set does not include the outlet box and mounting frame as shown in the illustrations. The elevator company usually provides a suitable type of frame and outlet box in which to mount the Inter-Phone Set. In some cases the elevator companies may wish to install a standard surface wall or hand type of instrument, depending upon the local requirements.

The starter's station Inter-Phone is usually installed in the control panel with the other operator's signalling equipment. This Inter-Phone may consist of a wall or hand type, depending upon the space available for mounting the instrument. The regular cab call button on the starter's panel will also be used for signalling the cab Inter-Phone by means of a code ring. Extra buttons will be provided for signalling the other stations in the system.

Assembly drawings of Inter-Phones and wiring diagrams will be furnished upon request.

Elevator Cable

For Inter-Phone and Signalling Systems

Control Cable with Steel Support

Size 16 A. W. G.

No.of Cond.	Wt.,Lbs. per M	O.D. In.	No. of Cond.	Wt., Lbs. per M	O.D. In.	No. of Cond.	Wt., Lbs. per M	O.D. In.
2	94	.585	8	213	.683	20	449	1.000
3	108	.585	10	267	.795	22	484	1.018
4	125	.585	12	325	.896	24	537	1.067
5	138	.585	14	360	1.003	26	580	1.111
6	160	.588	16	448	1.102	28	630	1.193
7	187	.588	18	482	1.202	30	680	1.212

Annunciator Cable without Steel Support

Size 18 A. W. G.

2	25	.254	8	70	.386	20	151	.525
3	32	.260	10	87	.452	22	166	.550
4	39	.288	12	106	.452	24	181	.575
5	46	.324	14	109	.452	26	200	.616
6	52	.336	16	121	.475	28	208	.616
7	61	.336	18	134	.500	30	214	.616

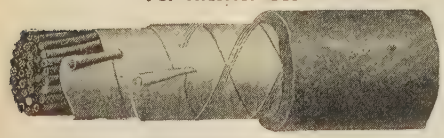
Lighting Cable (Size 14 A.W.G.)

No. of Cond.	With Steel Support Wt., Lbs. per M	With Steel Support O.D. In.	Without Steel Support Wt., Lbs. per M.	Without Steel Support O.D. In.
2	127	.677	107	.528
3	155	.677	135	.560
4	183	.677	163	.614

Further data on elevator cable furnished upon request.

Graybar Inter-phone Cable

For Interior Use



For Outside Use

The conductors are provided with single silk and single cotton insulation. The cable is impregnated with a wax compound and is covered with servings of paper and a heavy braiding, which is given a heavy coat of fireproofing paint.

Three general types of cable are provided.

1. Interior Cable with outside braiding treated with gray fireproofing paint. Use only in dry places.
2. Interior cable with brown glazed cotton outside braiding. Use only in dry places where exposed to view.
3. Outside cable, lead covered. Always use this cable outside, and inside where there is apt to be moisture even in a small degree. In conduit installations lead covered cable should be used.

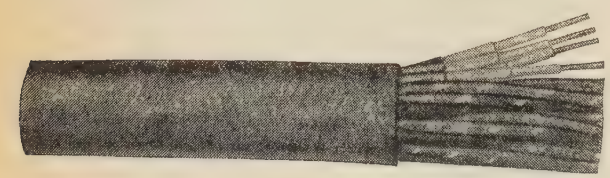
Lead-covered cables are not listed with separate Code Nos. Any fireproofed type of cable may be ordered with a lead sheath.

All cables are provided with a standard color scheme, so that each pair can be distinguished from any other. The pairs are properly twisted to prevent inductive disturbances.

Code No.	Conductors, A.W.G. No. 22	No. 18	Covering	Approx. O.D. In.
185B	4 singles	....	Fireproofed braid	1/4
161B	8 singles	....	Fireproofed braid	5/16
161B (Lead)	8 singles	....	Lead sheath	5/16
142B	8 singles	....	Brown cotton braid	5/16
162B	12 singles	....	Fireproofed braid	11/32
162B (Lead)	12 singles	....	Lead sheath	3/8
***164B**	6 singles	2 pr.	Fireproofed braid	13/32
***134B**	6 pr.	2 pr.	Fireproofed braid	13/32
***134B (Lead)**	6 pr.	2 pr.	Lead sheath	7/16
***155B**	6 pr.	2 pr.	Brown cotton braid	13/32
***141B**	12 pr.	2 pr.	Fireproofed braid	7/16
***141B (Lead)**	12 pr.	2 pr.	Lead sheath	1/2
***156B**	12 pr.	2 pr.	Brown cotton braid	7/16
***157B**	16 pr.	2 pr.	Fireproofed braid	17/32
***157B (Lead)**	16 pr.	2 pr.	Lead sheath	9/16
***158B**	20 pr.	2 pr.	Fireproofed braid	9/16
***158B (Lead)**	20 pr.	2 pr.	Lead sheath	19/32
***136B**	24 pr.	2 pr.	Fireproofed braid	19/32
***136B (Lead)**	24 pr.	2 pr.	Lead sheath	5/8
***140B**	31 pr.	2 pr.	Fireproofed braid	5/8
***140B (Lead)**	31 pr.	2 pr.	Lead sheath	11/16

*These cables also include two spare No. 22 B. & S. gauge conductors.

Whitney Blake Flexible Stranded Cable for Interphones and Signaling Systems



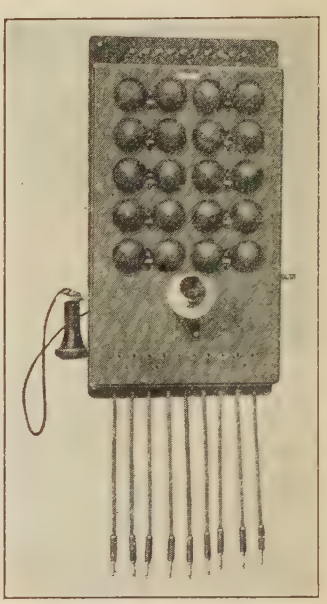
Finished in mercerized brown braid.

Color code of conductors is in accordance with standard telephone practice.

Code No.....	416WB	428WB	436WB	444WB	452WB
No. of Conductors..	16	28	36	44	52

No. 1012 *Western Electric* Magneto Wall Switchboards

Ringer Type



This switchboard is intended for use in exchanges having 10 lines or less, and where the number of calls does not warrant having a regular telephone operator in attendance.

It has been installed by numerous rural companies who desire a switching station established in the country in which case it is installed in a farmer's home and the calls are answered by members of the family.

Being equipped with ringers, constant attendance at the switchboard is not necessary as the bells can be heard at some distance from the board.

In addition to this ringer, indicators are supplied with each ringer which give a visible signal showing which bell has been ringing.

The cabinet is well constructed of thoroughly seasoned, quarter sawed oak, which is given a durable light finish. The front is hinged and the apparatus and wiring is within easy reach for inspection or maintenance.

Equipment

Each line is provided with a jack and a 1000 ohm ringer, although 1600 or 2500 ohm ringers can be furnished if required. Four-cord circuits, with a listening-in jack bridged across the tip and ring, and a listening cord are provided for handling the calls, no supervisory or ring off signals being provided. A powerful five-bar hand generator is furnished for ringing purposes. The operator's telephone set consists of the regular long distance transmitter and receiver.

Operation

Subscribers are called by ringing with the hand generator over the listening cord with which the operator answers calls and listens in for supervisory purposes. Connections are made with the other cords, without the use of keys.

Western Electric Magneto Non-Multiple Switchboards

No. 1800 Sectional Unit Type

Method of Assembling No. 1800 Switchboard to 35 Line Capacity

The unit or sectional type construction for the small switchboard was introduced by the Western Electric Company a number of years ago, and since that time has been supplying the demand of discriminating buyers for a small switchboard that would meet their traffic requirements and eliminate the necessity of buying an "oversize switchboard."

The capacity of the No. 1800 Unit Type Switchboard is from 10 to 50 lines. While 50 lines has been set as an arbitrary maximum it is safe to assume that with a normally low calling rate as many as 70 or 80 lines can be handled conveniently. While the No. 1800 Unit Type Switchboard is small in size (floor space required only 2 feet x 2½ feet), this does not mean that this board receives less consideration or care in manufacture than a larger switchboard, for the same quality of material, skilled workmanship and rigid inspection are applied to all of the Western Electric products regardless of size. Red oak lumber, which has been kiln-dried, thoroughly seasoned and given a dark rubbed finish, is used in the construction of the units. The inside of the units have been specially treated to preserve wood and prevent warping or cracking.

To meet various requirements, there are different types of base or supporting units, cord units, line units and top units. To assemble a switchboard of 10 lines capacity for example it is only necessary to select units as follows:

1 Supporting Unit	1 Line Unit
1 Cord Unit	1 Top Unit

These units are easily assembled into a complete switchboard which presents a neat, compact and serviceable appearance and can be arranged to meet any service condition. Line units can be added at any time.

All of the apparatus and terminals associated with the operator's cord and telephone circuits are mounted in the cord unit.

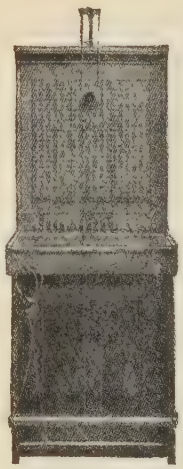
The circuits used are very simple. A diagram of each circuit is pasted to the inside of the rear doors for convenient reference. The back of each unit is hinged and, when open, all of the wiring and equipment are easily accessible.

This switchboard is specially recommended for small, rapidly growing telephone exchanges where the ultimate capacity cannot be definitely determined.

No. 1240-D *Western Electric* Magneto Switchboards

Non-multiple—Automatically Restored Line Signals

Capacity, 165 Lines 15 Cord Circuits



Front View

This standard efficient magneto switchboard has been giving universal satisfaction in all parts of the United States and foreign countries. Designed by the largest corps of telephone engineers in the world and equipped with reliable, efficient apparatus, it has met with the approval of operating companies requiring magneto switchboards that insure a long life of service, coupled with economical operating and maintenance.

Where more than 165 lines are required several sections may be lined up with good results. This has been done in numerous cases and the desired capacity obtained without any complications. All of the apparatus used in this switchboard has been proven reliable and efficient in operation, by many years of service, it being economical to maintain and exempt from repairs to an exceptional degree.

The operation of the No. 1240-D switchboard is simple and easily performed for the line jacks are so grouped as to be within easy reach of the operator, reducing that work to a minimum.

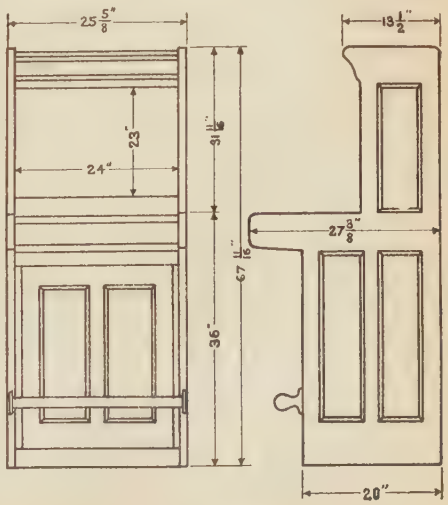
The lumber used in the construction of the cabinet is red oak, thoroughly seasoned and kiln dried to prevent warping or cracking.

The exterior of the cabinet is given a dull golden oak finish which is very serviceable. As an added precaution against warping, cracking or decay the interior surfaces are coated with shellac.

The steel framework which supports the face equipment is copper plated as a protection against corrosion or rust, also insuring a positive ground connection for the apparatus.

An apparatus and terminal board is mounted in the rear of the switchboard on which are mounted the repeating coils, night alarm bell, and large screw terminals where all power wiring such as power ringing, transmitter battery, night alarm battery, monitor taps, etc., are terminated.

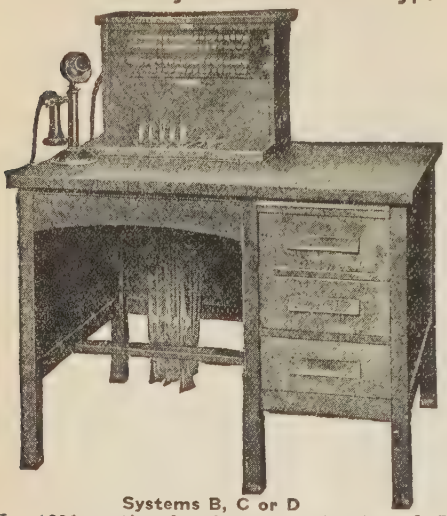
The No. 1240-D non-multiple magneto switchboard is furnished with either single or double supervision cord circuits. Single supervision boards may, if desired, be equipped with five cord circuits having toroidal repeating coils and switching keys. Double supervision boards may be equipped with either the condenser type non-hang-up cord circuits, or the condenser repeating coil type non-hang-up, non-ring-through cord circuits. The present switchboard, if arranged for single supervision, may be changed to a double supervision board simply by installing the necessary additional apparatus.



Dimensions

No. 1801 *Western Electric* Private Exchange Switchboards

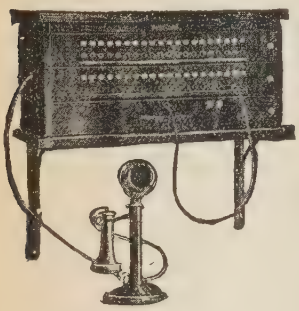
Central Battery—Sectional Unit Type



Systems B, C or D

The No. 1801 sectional unit type switchboard (like the No. 1800) was originated by the Western Electric Co., and introduced to the telephone trade to supply the demand for a small flexible and economical switchboard. Adaptable to many conditions, this switchboard has been installed by small telephone companies, as private branch exchanges, for hotels, factories, public schools and institutions or any place where telephone service was required and the ultimate capacity could not be definitely determined.

Being of the unit type, with construction somewhat similar to the sectional book case, and so arranged that additional units may be readily added when required, this switchboard is adaptable to many line and traffic conditions which are met on the small exchange. The rear of the units is permanently closed. The front panels of all units are held in place with thumb screw locks and are hinged to permit access to the wiring, terminals and apparatus. All connections are made under screw terminals.



System A

The No. 1801 has lamps for the line and supervisory signals. Birch lumber, with a mahogany finish, or quarter sawed red oak which has been kiln dried and thoroughly seasoned to prevent warping and cracking is used in the construction of the units.

Four systems—"A," "B," "C" and "D" have been devised to handle the various classes of service required in this type of switchboard. Telephones which can be used with the systems are listed under heading: Central Battery Telephones.

System A.—This system provides for communication between the switchboard and stations only. There are no facilities for inter-communication between stations or for connections to a central office.

System B.—This system embodies all of the features of System "A" and in addition has facilities or intercommunication between stations.

System C.—This system embodies all of the features of System "B" and in addition two plug ended trunks are provided which may be equipped for connections to either magneto or central battery central offices.

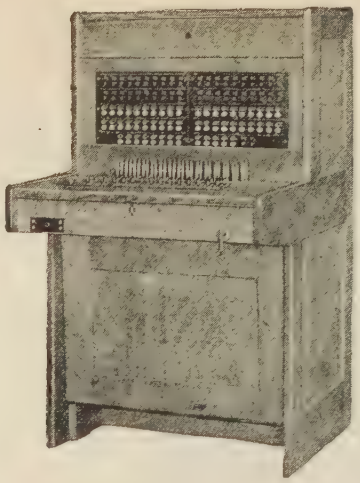
Note.—Direct current is used for ringing the telephone bells in Systems A, B and C.

System D.—This system has all of the features of system "C" except that it employs the regular two wire line circuit, and alternating current is used for ringing purposes.

The telephone sets used with this system are the regular central battery sets used with central office systems.

Write our nearest house for particulars. State which system is best suited for your requirements.

No. 551 Type *Western Electric* Private Branch Exchange Switchboards



This switchboard has the distinction of being a pioneer in the private branch exchange field since the adoption of the modern flat type relays, it being the first private branch exchange switchboard in which the new relays were used. Either the No. 551A or 551B switchboard makes an ideal installation for department stores, factories, hotels, and apartments in cities or towns where the present main central office is a dial exchange or a central battery manual office.

The compact cabinet presents a neat appearance and compares favorably with the furniture in any modern office.

Types and Capacity

Type	551A (40)	551B (80)	551B (320)
Station Lines Total	40	80	320
*Station Lines Wired for Relays	10	20	20
Trunk Lines	10	15	15
Cord Circuits	10	15	15

*Certain lines are wired for relays to be used on lines where the telephone is located a considerable distance (800 feet) from the switchboard. Relays are not provided unless specified.

The No. 551D is a multiple P.B.X. for use where the number of station line circuits does not exceed 360 lines. The capacity of the No. 551D multiple P.B.X., based upon a minimum of three 2-panel sections, is as follows:

Station Line Circuit	3-panel basis	36
Trunk Circuit	3-panel basis	30
Cord Circuit	per section	15

Red oak lumber with a dark finish or birch with a mahogany finish is used for all exposed woodwork parts. The lumber is kiln dried and thoroughly seasoned to prevent warping and cracking. Iron reinforcing brackets are placed on the inside of the cabinet at the corners giving added strength. The keyshelves and fronts of the 551-P.B.X.'s have been faced with phenol fibre rubbed a dull black which not only results in a pleasing rich appearance but provides a hard and durable surface.

The stile strips which hold the line jacks and lamp sockets in place as well as the key mounting strips in the keyshelf consist of cold drawn galvanized steel. This insures alignment of the face and keyboard equipment, also prevents damage from moisture.

All apparatus inside the section, except hand generator and ringing resistance lamp, is mounted upon a relay gate which makes equipment immediately available for adjustment while gate is closed and leaves wiring fully exposed when gate is open. Cord-weight protection panel is mounted on the relay gate rather than being fixed in the section so that when gate is open and work is being done on cords or hand generator the gate wiring is still protected from damage.

Gate is equipped with mounting clips and screws. The mounting clips hold the relay mounting plates on the relay gate and permit the use of the one-piece relay gate.

The cabinet is compact and all parts are easily accessible. Switchboards in the 80-line capacity are equipped with removable end panels. This permits lining up of 2 boards and makes an ideal installation where several positions are required.

The line circuits are simple and terminate on terminal strips which are easily accessible.

No. 551 Type *Western Electric* Private Branch Exchange Switchboards

Continued

Certain lines are arranged for use with relays and intended to be used for the stations located considerable distance (800 feet) from the switchboard. The latest standard flat type relays are used throughout which permits placing the maximum amount of equipment in a small place.

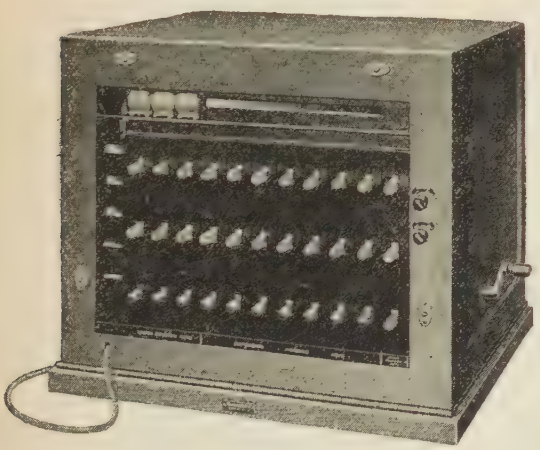
Strip line jacks and associated lamp sockets are used in all boards on the line circuits. The number of jacks and lamps required are equipped and the remaining jack and lamp positions plugged with apparatus blanks. The blanks can be removed and jacks and lamps installed at any time. The panels upon which the individual jack and lamp sockets are mounted consist of one piece of dull finished black faced fibre which does not reflect the light. A designation strip is provided above each row of jacks for convenience in numbering. The black faced fibre panel presents a neat appearance and insures perfect alignment of the face equipment.

Jack ended trunks are used on all No. 551 type boards. The jacks and lamp sockets are individually mounted.

The cord circuits embody all of the features required for the successful operation of the private branch exchange. Connections between stations and from stations to trunks are easily established. Each cord circuit is arranged for dialing by the operator from the board and through dialing from any station on the private branch exchange to the machine switching exchange. This through dialing is accomplished by the operator throwing the night key and through dialing key in the proper position after putting up the night connections. The function of the night key is to cut out all the equipment from the circuit which is not required for night service.

The dial may or may not be used as desired it being easily installed when needed. It is connected to the local cable by means of a flexible cord and the dial itself held in place by a spring clip which is screwed to the keyboard. When the dial is not equipped the hole for the cord is suitably covered with an apparatus blank.

No. 506 *Western Electric* Central Battery Cordless Type P.B.X. Switchboards



Ideal as a dependable private branch exchange. Switchboard is of the single-operator position, cordless type, with all connections established by the operation of keys.

The entire equipment is enclosed in a cabinet of light oak, or of mahogany with a rich mahogany-walnut finish.

This board is a compact and effective switching unit, and harmonizes with other office furnishings.

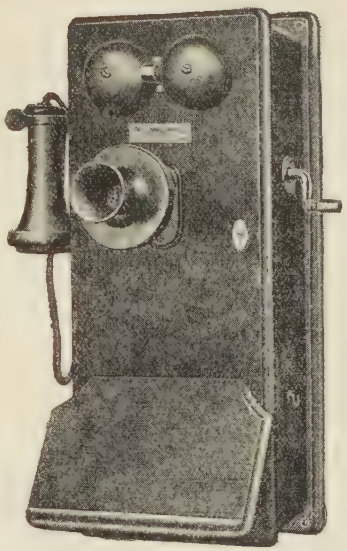
The cabinet and steel framework are designed to permit the utmost accessibility of the apparatus.

The circuits are arranged for local manual service and for operation into either central battery manual offices or into panel or step-by-step automatic offices.

Western Electric Magneto Telephones

No. 1317 Type

General Description



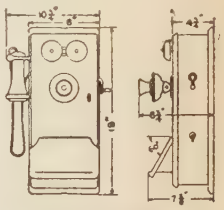
2-Cell, Closed View

The No. 1317 type telephone represents the highest development attained in magneto telephone design and construction. It has been standard with the Western Electric Company for more than a decade, and its high efficiency, reliability and long life has been thoroughly proven by the hundreds of thousands in service.

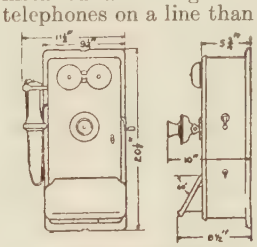
2 and 3-Cell Types

No. 1317 telephones are made in two styles, namely, the "2-cell" and the "3-cell." The talking circuits of these two types are identical, i.e., they employ the same transmitters, receivers and induction coils. The battery compartment of the "3-cell" type is sufficiently large to take three standard dry cells, whereas only two dry cells can be placed in the "2-cell" type. The larger cabinet of the "3-cell" type also permits the mounting of the No. 48 type (5-bar) generator, while the "2-cell" type employs the No. 50 type (large 3-bar) generator.

The 3-cell set is the more powerful and the better set from a transmission standpoint but where a smaller set is desired the 2-cell sets can be used. The 50 type generator is exceptionally powerful for a 3-bar generator. This generator will ring thirty 2500 ohms ringers connected to a No. 12BB iron metallic telephone line 15 miles in length (provided, of course, that the line is properly installed and in good condition). It will operate more telephones on a line than many 4 or 5-bar generators.



2-Cell Dimensions



3-Cell Dimensions

Woodwork and Finish.—The cabinet is made of quarter sawed oak and given three coats of high-grade varnish rubbed down by hand. Unexposed surfaces of the telephone are also given a protective finish so as to prevent warping.

Wiring.—All terminals including those for the transmitter, receiver, cord, line wires, etc., are plainly marked so that there can be no possible mistake when making connections. The various cords, such as those of the transmitter and receiver and the flexible leads running to the condenser are all furnished with cord tips.

A complete and explanatory circuit label is pasted on the inside of the door of each telephone, in addition to which a booklet is furnished giving complete instructions for installation and maintenance.

Metal Finish.—The transmitter bracket, gongs, switch hook, generator, crank and lock escutcheon are given an extremely durable and pleasing black finish.

Adjustment.—These telephones are carefully adjusted in the factory, and should, therefore, be satisfactory for service as received by the customer unless unusual service conditions should be encountered, in which case only the ringer will require readjustment. The adjustment of the ringer is a very simple matter and instructions furnished in the booklet are so clear that no difficulty will be encountered.

Western Electric Magneto Telephones

No. 1317 Type—Continued

No. 1317, 2-Cell, Open View

No. 1317 3-Cell Type

The 3-cell set is the more powerful and the better set from a transmission standpoint but where a smaller set is desired, the 2-cell sets can be used. The 50 type generator is exceptionally powerful for a 3 bar generator.

Code No.	Ringer Code No.	Ringer Res. (Ohms)	Generator Code No.	Generator Condenser
1317-AH	38-AG	1000	22-A	.....
1317-N	38-FG	1600	48-A	.....
1317-R	38-FG	1600	48-A	21-W
1317-P	38-BG	2500	48-A	.....
1317-S	38-BG	2500	48-A	21-W
1317-BA	38-FG	1600	48-A	.....

Code No.	Class of Signal Service: Telephones to Cent. Office	Cent. Office to Telephones	Line Conditions as Regards Load
1317-AH	Code	Code	Light
1317-N	Code	Code	Medium
1317-R	Code	Code	Medium
1317-P	Code	Code	Heavy
1317-S	Code	Code	Heavy
1317-BA	*C. O. Selective	Code	Medium

No. 1317C 2-Cell Type

Code No.	Ringer Code No.	Ringer Res. (Ohms)	Generator Code No.	Generator Condenser
1317-CH	53-AG	1000	22-BA	.....
1317-CN	53-FG	1600	50-F	.....
1317-CR	53-FG	1600	50-F	21-W
1317-CP	53-BG	2500	50-F	.....
1317-CS	53-BG	2500	50-F	21-W

Code No.	Class of Signal Service: Telephones to Cent. Office	Cent. Office to Telephones	Line Conditions as Regards Load
1317-CH	Code	Code	Light
1317-CN	Code	Code	Medium
1317-CR	Code	Code	Medium
1317-CP	Code	Code	Heavy
1317-CS	Code	Code	Heavy

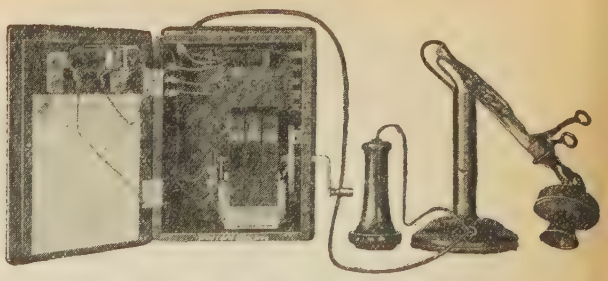
In addition to the above-mentioned apparatus all of these telephones are equipped with the following apparatus:

No. 13 Induction Coil.
No. 323 Transmitter.
No. 8A Transmitter Bracket.
No. 144 Receiver.
No. 143Y Switchhook.

*Equipped with No. 1006A push button, Telephone user can signal central office secretly or not as desired and can signal other parties on same line by code ringing.

Western Electric Magneto Telephones

Nos. 6003 and 6004 Desk Types

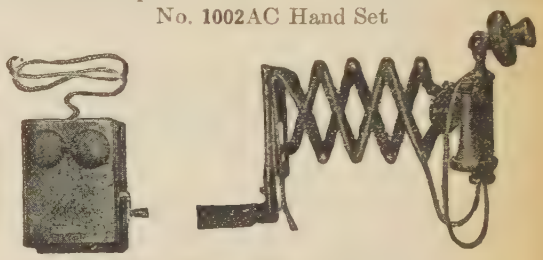


Interior View of No. 6004D

The Nos. 6003 and 6004 type desk telephones consist of a No. 1020 AL Desk Stand and a No. 300 or 315 type Desk Set Box. These telephones comprise the combinations of desk stands and desk set boxes that are most used, and therefore for convenience in ordering, are covered by a single code number.

Combinations of apparatus differing from those covered by these code numbers listed may be obtained by ordering the separate items that will make up the desk telephone desired. The following items of apparatus are the electrical equivalent of the No. 1020 AL Desk Stand and may therefore be used in connection with any of the desk set boxes listed below.

No. 1048AA Telephone Arm
No. 1048AB Telephone Arm
No. 1048AC Telephone Arm
No. 1001C and H Hand Sets
No. 1002AC Hand Set



No. 300 Type Desk Set Box and No. 1048 AA Telephone Arm

Code No.	Desk Stand	Desk Set Box	Contents of Desk Set Box: Generator	Ringer Code No.	Ringer Resistance (Ohms)	Bias Feature
6003B	1020AL	315H	22A	51AG	1020	None
6003C	1020AL	315J	22E	49BG	2500	Spring and Screws
6004B	1020AL	300K	48A	51BG	2500	None
6004C	1020AL	300L	48A	51FG	1620	None
6004D	1020AL	300AA	50A	51BG	2500	None
6004E	1020AL	300AB	50A	51FG	1620	None

Code No.	Desk Set Box (Continued) Condenser	Ind. Coil	Class of Signal Service: Telephones to Central Office	Central Office to Telephones	Line Condition as Regards Load
6003B	None	13	Code Ringing Can Only Signal Central	Code Ringing 2 or 4 Party Selective	Lightly Loaded
6004B	None	13	Code Ringing	Code Ringing	Heavily Loaded
6004C	None	13	Code Ringing	Code Ringing	Medium Loaded
6004D	None	13	Code Ringing	Code Ringing	Heavily Loaded
6004E	None	13	Code Ringing	Code Ringing	Medium Loaded

Note.—In the case of the Nos. 300AA, 301AB, 315H, and 315J Desk Set Boxes provision is made for inserting a one microfarad condenser (see No. 21W condenser) in series with the receiver. However, condensers are not furnished unless so ordered.

Western Electric Central Battery Telephones

Nos. 6054 and 6059 Desk Type

No. 6054 Desk Telephone –No. 1020AL Desk Stand Partially Dismantled

The Nos. 6054 and 6059 desk type telephones consist of a No. 1020 type desk stand and a desk set box. These telephones comprise the combinations of desk stand and desk set boxes that are most used and, therefore, for convenience in ordering are covered by a single code number.

Combinations of apparatus differing from those covered by the No. 6054 or 6059 series of code numbers may be obtained by ordering a desk stand and a desk set box as separate items, also a telephone arm or a hand set may be used in place of the desk stand if desired.

For example, any of the desk set boxes that will function with the No. 1020AL desk stand will also function with the following:

No. **1048**AA Telephone Arm
No. **1048**AB Telephone Arm
No. **1048**AC Telephone Arm
No. **1001**C and H Hand Sets (See Hand Set Hangers)
No. **1002**AC Hand Set

Telephone Code No.	Telephone Code No. Covers: Desk Stand	Desk Set Box Code No.	Contents of Desk Set Box: Ringer Code No.	Ringer Res. (Ohms)	Condenser
6054E	**1020**AL	**534**E	**41**SG 33⅓ Cycles	....	**21**BW
6054F	**1020**AL	**534**F	**41**TG 50 Cycles	....	**21**BW
6054G	**1020**AL	**534**G	**41**UG 66⅔ Cycles	....	**21**BW
6054H	**1020**AL	**534**H	**41**RG 16⅔ Cycles	....	**21**BW
6054AR	**1020**AL	**634**AR	**72**AG	1000, 3000	**194**B
*6059A	**1020**AL	**584**A-3	**78**AG	1500	**149**A
*6059B	**1020**AH	**584**K	**78**AG	1500	**149**A

Telephone Code No.	Relay	Induction Coil	Talking Circuit	Kind of Ringing	Ringing Current
6054E	....	46B	Std. C.B.	Harmonic 4-Party	Harmonic
6054F	....	46B	Std. C.B.	Selective or	Harmonic
6054G	....	46B	Std. C.B.	8-Party Semi-	Harmonic
6054H	....	46B	Std. C.B.	Selective	Harmonic
6054AR	85N	146B	Std. C.B.	4-Party Selective	Pulsating Current
*6059A	....	46C	Std. C.B.	Single Party & 2-	A.C.
*6059B	....	....	Series C.B.	Party Selective	A.C.

*The Nos. 6059A and 6059B Telephone Sets replace the Nos. 6054A and 6054K Telephone Sets, respectively.

See listings of No. 534 type desk set boxes, No. 1040 desk stands and protectors.

No. 202A-3 Hand Telephone Set with a No. 584A-3 Subscriber Set

Intended for general use at common battery manual stations on non-polarized ringing lines. The No. 78AG Ringer used is biased to prevent tapping.

Hand Telephone Set	Hand Set Mounting	Apparatus Blank No.	Cords	Hand Set
202A-3	D1-3	50J-3	*D4N-9	E1B-3

*Will be furnished with a D4S waterproof cord instead of the D4N-9, when specified in the order.

No. 584A-3 Subscriber Set

Code No.	Ringer No.	Condenser No.	Induction Coil
584A-3	**78**AG	**149**A	**46**C

Western Electric Central Battery Telephones

Nos. 1533, 6054, and 6059 Types

Ringer and gongs are enclosed within the case thereby preventing tampering, reducing maintenance and greatly improving the appearance.

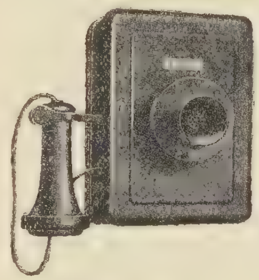
Case is made of heavy sheet steel, copper-plated, and finished with two coats of extremely durable black enamel (baked on) especially developed for this particular purpose.

The case is constructed so that every part of the interior is easily accessible when the cover is opened.

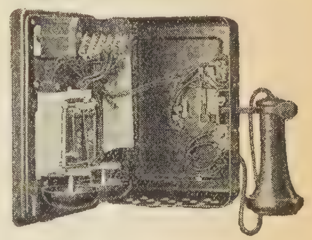
The base is flanged, thereby giving greater rigidity and preventing base from cutting into plastered surfaces.

Unit type of construction and universal terminal block employed. This permits of the telephone being readily converted from one class of service to another. This also permits of a desk set box being converted into a wall telephone or vice versa by a substitution of covers.

No. 1533 Type Telephones



No. 1533A



No. 1533A—Interior

Telephone Code No.	Transmitter	Receivers	Ringer Code No.	Ringer Res. (Ohms)	Condenser
1533A	**323**	**144**	**68**AG	1600	**21**BW
1533K	**323**	**171**	**68**AG	1500	**149**A
1533Y	**323**	**144**	**8**AG	*1400	**149**A
1533AR	**323**	**144**	**72**AG	1000, 3000	**21**AP
1533E	**323**	**144**	**41**SG 33⅓ Cycles	460	**21**BW
1533F	**323**	**144**	**41**TG 50 Cycles	285	**21**BW
1533G	**323**	**144**	**41**UG 66⅔ Cycles	200	**21**BW
1533H	**323**	**144**	**41**RG 16⅔ Cycles	1800	**21**BW

Telephone Code No.	Relay	Induction Coil	Talking Circuit	Kind of Ringing	Ringing Current
1533A	...	46B	Std.	2-Party Selective or 4-Party Semi-Selective	.....
1533K	...	...	Series C. B. Central Bat. Signalling	Single Party 2-Party Selective	A.C.
1533Y	...	13	Local Bat. Talking	4-Party Semi-Selective	A.C.
1533AR	85J	46B	Std.	4-Party Selective	P.C.
1533E	...	46B	Std.	Harmonic 4 and 8-	Harmonic
1533F	...	46B	Std.	Party Selective	Harmonic
1533G	...	46B	Std.		Harmonic
1533H	...	46B	Std.		Harmonic

*The No. 8AG Ringers were formerly wound to 1000 ohms instead of 1400 ohms. The 1000 and 1400 ohm ringers have the same impedance and may be used interchangeably in service.

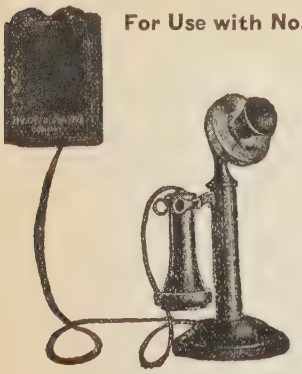
All of these telephones are equipped with the No. 7A Transmitter Bracket, two TiA 6-inch transmitter cords, and a 30-inch No. 521 Receiver Cord with the exception of the No. 1533K, which contains one No. 92 Cord (3 feet long) in place of the No. 521 Cord.

See separate listing for "Central Battery Telephones for use with No. 1801 Switchboards," and for protectors.

The No. 323 Transmitters have a black finish.

Western Electric Central Battery Telephones

For Use with No. 1801 Switchboard



No. 6000AE

No. 1539A

Systems A and B

The telephones for No. 1801 Switchboard Systems A and B are of the series talking circuit type and equipped with 140 ohm vibrating bells which operate on direct current.

Code No.	Case and Finish	Mounting	Receiver
2537A	Metal, Black	Surface Wall	Watch Case Type
2539A	Metal, Black	Flush Wall	Watch Case Type
1533N	Metal, Black	Surface Wall	Hand Receiver
6034AU	No. 1020BJ Stand Desk		Watch Case Type

NOTE.—Information on hand set type telephones and desk telephones equipped with hand receivers will be furnished on application.

System C

The telephones for No. 1801 Switchboard System C may be of the same types as used for Systems A and B, but in case the system is connected to an outside exchange, telephones equipped with standard central battery induction coil talking circuit should be used in order to obtain satisfactory transmission, as follows:

Code No.	Case and Finish	Mounting
1533M	Metal, Black	Surface Wall

System D

Any standard central battery telephone with ringers operated by alternating current either induction coil or series types can be used with System D. The No. 1533A wall type and No. 6059A desk type telephones may be selected for this system.

No. 1320 Type Telephones for Police Service

No. 1320A Outer Door Open

The No. 1320 type is a metal case weatherproof telephone for central battery service. It was designed primarily for the Police Patrol Service but will be found very satisfactory for general central battery service where a weatherproof telephone is required.

The apparatus is mounted on a metal frame which is removable as a unit from the case. An inner door protects the apparatus from the weather when the outer door is open. The overall dimensions are 6 9/16 inches deep by 13 1/8 inches high by 12 3/4 inches wide.

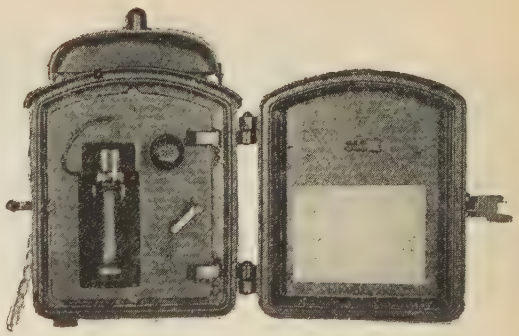
A loud ringing extension bell may be connected in multiple with the ringer of this telephone thereby providing means of signaling a patrolman from a distance (see extension bells).

A tapped hole is provided in each end of the case for receiving conduit. Four holes are drilled in the back of the case for receiving mounting screws or mounting clamps. The lock on the outer door is designed so that the key cannot be removed until the door is closed.

Outer door is not marked. Standard finish, gray paint.

Special No. 1320A telephones may be obtained with outer doors marked (raised characters cast on door) in accordance with customer's requirements; color of finish, as specified.

Western Electric Magneto Mine Telephones



No. 1336 with Outer Door Open

Code No.	Transmitter	Receiver	Receiver Cord	Condenser	Ringer Code No.	Ringer Resistance
1336A	312	144A	384	None	None	
1336E				None	45BG	2500
1336J			10½ in.	21W	45BG	2500
1336K				21W	45BG (Spl.)	1600
1536E	312	558	R2AD	*21F	63BG	2500

Code No.	Ringer Operating On	Generator Code No.	Generator Current	Signalling Service	For Line Load
1336A, 1336E, 1336J	A.C.	48C	A.C.	Code Ringing	Heavily Loaded
1336K	A.C.	48C	A.C.	Code Ringing	Medium Loaded
1536E	A.C.	51A	A.C.	Code Ringing	Heavily Loaded

*Furnished only when specified in order.

A reliable telephone system in a mine permits instant communication throughout the plant. Routine business can be easily handled with such a system. In cases of power suspension, shut downs, or emergencies involving possible loss of life or of property the telephone is of inestimable value.

GENERAL—There are three classes of location must be considered for mine telephones. 1. Dry locations above ground or in protected parts of the workings such as the Superintendent's office and the engine room. In such locations the standard wall or desk magneto telephones are recommended. 2. Exposed locations above ground or in mines in which methane or other explosive gases or coal dust are not likely to be present in dangerous proportions. In such locations No. 1336 type telephones are recommended. 3. Mines or other locations in which methane or other explosive gases or coal dust are likely to be present in dangerous proportions. The No. 1536 type telephone is recommended for such locations.

No. 1336 Type Telephones

Briefly these are metal case magneto telephones in which the apparatus has been especially treated to provide resistance to moisture, acid fumes, and non-inflammable gas. All parts are enclosed in a cast iron case which provides protection against damage from water and falling objects. The top of the case is rounded so that water will readily drain off and any objects falling on the top will slide off to the ground. An outer door totally encloses all parts including the transmitter receiver and generator crank.

Western Electric Magneto Mine Telephones

Continued

No. 1336 Type Telephones

The sets are primarily designed for use on lines to which a large number of telephones are connected and where code ringing is used. Although intended chiefly for mine service they are also recommended for out-of-door use as in railway service, police alarm, etc.

Equipped with a No. 143J switchhook and a No. 31 induction coil.

Special No. 1336 type telephones equipped with a heavy brass padlock with 2 keys are obtainable. The padlock is attached to chain in place of latch pin. Orders for these telephones must state that padlocks are desired.

No. 1336A telephone is not equipped with a ringer. Intended for use where an extension bell is preferred to the regular telephone ringer, also for service where all the calls will be outgoing.

No. 1336E differs from the No. 1336A in that it is equipped with a ringer and an iron hood for protecting the gongs.

No. 1336J differs from the No. 1336E only in that a condenser is provided to permit the ringers of this telephone as well as others on the same line, being rung even though its receiver may have been left off the switchhook.

To add a condenser to a No. 1336 type telephone that was not originally so equipped the following apparatus and parts should be ordered: No. 21W condenser, one condenser strap P-43065, and two round head machine screws P-110187.

Dry Cells

Two standard size dry cells are required for each telephone to furnish current for talking. Western Electric Blue Bell Dry Cells are specially designed for telephone service and are recommended because they last longer and are more efficient for this class of service than other dry cells.

Two special Blue Bell Dry Cell cartons, impregnated with moisture-proofing compound, are furnished with each No. 1336 type telephone. These are to be substituted for the standard cartons furnished on the dry cells. These cartons resist the action of any moisture that may form on the inside of the case and prevent current leakage and rapid deterioration.

Case

The box, outer door, inner door and gong hood are of cast iron heavily coated with a rust-resisting finish. When the outer door is closed only the metal transmitter mouthpiece, receiver, receiver cord and the generator handle are exposed. When the outer door is closed these parts are protected from mechanical injury. When using this telephone it is, of course, evident that only the outer door need be opened.

Entrance for Line Wires

The line wires may be brought in either at the top or the bottom of the case. A short length of pipe is screwed into the top of the case and is covered with a pipe cap. This cap prevents water running into the set by following the line wires. In case the line wire is to be run to the telephone in pipe (conduit) no difficulty will be encountered in joining the conduit to the telephone as the wire entrance hole at bottom as well as the top of the case is tapped.

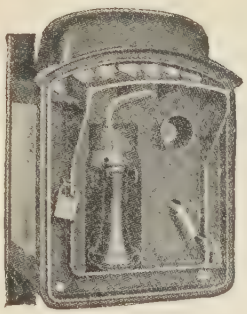
Mounting

Wrought iron mounting bars are secured to the back of the case. The upper end of these have pear shaped holes, and with this arrangement the telephone can be readily mounted by one man and without any danger of damaging it. This is accomplished by driving two lag screws into the mounting surface until their heads project about ½ inch. The telephone may then be hung upon these mounting screws (the heads of the lag screws will pass through the large end of the pear shaped holes) after which the lower mounting screws may be driven into place through the holes in the lower end of the mounting bars. Wrought iron mounting bars are employed as they are less subject to breakage than if lugs were cast on the case.

Western Electric Magneto Mine Telephones

Continued

No. 1536 Type Telephones



Designed especially for use in mines and other locations subject to the hazard of explosive gases or coal dust and have been declared by the United States Bureau of Mines permissible for use in mines or other locations where methane or other explosive gases or coal dust are likely to be present in dangerous proportions.

No. 1536E telephone is the same as the 1336E except that protective features are incorporated in the electrical contacts of the switchhook, generator, ringer. No. 1536E has a 149A switchhook, a 31 induction coil and is furnished without condenser unless the condenser is called for in the order. The outer door is omitted. Projecting hood over the door protects the transmitter, receiver and generator crank. Line wires are brought in either top or bottom, when from the top an angle fixture is provided so moisture cannot enter. Holes in the bottom of the set drain off any accumulation of moisture. Special cordage adapter is provided at the receiver connection of the cord. Unusually hard usage and hoisting will not fray the insulation. Internal mechanism, batteries, line connection, etc. in the housing are inaccessible without unlocking the door and removing the cap screws around the side of the door. Switch hook, generator and ringer are separately removable so they can be carried away for repairs.

Two Blue Bell dry cells with screw terminals are furnished as part of the set. Cartons P-201339 are furnished with sets, but new cells can be ordered without cartons as one carton has a longer life than the cell. Wrought iron bars are secured to the back of the set for mounting. Two lag screws are needed (but not furnished) to mount set. Set as furnished is permissible, any change automatically voids the approval of the Bureau of Mines.

Systems

For a system in which all the telephones are connected to a party line, the set should be of such a design that all the stations can be clearly signaled, for example: No. 1336J telephone set for service below ground or exposed locations above ground and the 1536E for gaseous locations. No. 1317S wall telephone set for service above ground in unexposed locations or No. 6004-B desk type telephone set.

It is preferable, in cases where the size of the system warrants, to use a number of lines connected to a switchboard rather than to depend on one party line. Any of the lines may be a party line but it is much better to have the important stations such as engine room and superintendent's office connected to the switchboard by individual lines. With a switchboard and individual lines the 1336E or the 1536E telephones should be used below ground and in exposed locations. For the lightly loaded lines above ground and not exposed the 1317AH wall telephone set or the 6003B desk telephone set can be used.

Ringers and Extension Bells

The ringers used in these telephones may be readily adjusted if necessary with a screwdriver. The gongs emit a loud distinct ring, which can be heard a long distance, particularly so underground. However it is often desired to provide loud ringing extension bells in connection with mine telephones and for this purpose the No. 392 and No. 342 type subscribers sets are recommended as they are designed to withstand the severe conditions encountered in mine service.

Protectors

The telephone installed above ground should be equipped with protectors consisting of open space cut outs (for example the No. 60AP protector) to prevent damage to the telephone by lightning. In case there is a chance of contact between the telephone line and a power circuit protectors consisting of open space cut outs and fuses (for example the No. 58AP protector) should be used.

Western Electric Street Railway Telephones

Magneto and Battery Types

No. 1278 type telephones employ weatherproof iron boxes and are provided with insulated circuits. They are intended principally for exterior use by street railway companies operating telephone lines on which there is a chance of crosses with low voltage power circuits. This type telephone is arranged so that its circuit is cut off from the line except when its door is opened. When the telephone is in use a repeating coil is interposed between the line and telephone circuit proper, so as to protect the user, as far as possible, from the chance of injury should the line become crossed with a low voltage circuit. When the door is opened, a line switch is released which connects one winding of the repeating coil across the line and connects two fuses and two open space cut-outs into this circuit. The telephone circuit proper is connected to the second winding of the repeating coil and has no direct contact with the line circuit. The fact that a repeating coil is interposed between the line circuit and the telephone circuit reduces the efficiency of the telephone to some extent and, therefore, the use of these telephones is not recommended on heavily loaded lines, except where the protective feature is essential. See No. 1336 type telephones. In case a car is held up awaiting orders from the dispatcher the door of the telephone is left open so as to permit of the telephone being signalled. (It is impossible for the telephone to be signalled when its door is closed.) As the talking circuit is only closed when the push button in the hand set is depressed, the battery in the telephone is not wasted under the above condition. The apparatus of this telephone is mounted on an iron shelf, which may be removed as a unit from the telephone for inspection. The connection between the apparatus on the shelf and the line and ground terminals is made through the medium of clips which register with contacts mounted on a terminal block secured to the back of the case. The case and door are of cast iron and have a galvanized finish. Both the top and bottom ends of the case are tapped for receiving ½ inch conduit.

The F, G and J telephones are equipped with a lock which is arranged so that the key cannot be removed until the door of the telephone is closed. The No. 1278H is equipped with a hasp, staple and pin similar to that used on No. 1336 type telephones, but padlock is not included.

For Magneto Service

Code No.	Hand Set	Ringer Code No.	Ringer Resistance (Ohms)	Generator	Ind. Coil	Repeating Coil	Lock	Class of Signal Service	For Line Load
1278F	1001H	51AG	1000	†48C	13	25E	5B	†Code	Medium
1278G	1001H	51AG	1000	†48C	29	25E	5B	†Code	Medium
1278H	1001H	51AG	1000	†48C	29	25E	*None	†Code	Medium

For Local Battery Talking and Central Battery Signalling

Code No.	Hand Set	Ringer Code No.	Ringer Resistance (Ohms)	Generator	Ind. Coil	Repeating Coil	Lock	Class of Signal Service	For Line Load
1278J	1001H	51AG	1000	None	13	25E	5B	†Code	Medium

Designed for medium line load.

In addition to the apparatus listed above these telephones are each equipped with: A special door switch. A special protector.

2 D. & W. No. 5001 Type C fuses—500 volt 1 ampere.

2 No. 2 protector blocks.

2 No. 1 protector blocks.

2 No. 3 protector micas.

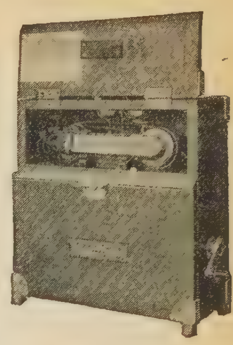
Dry cells must be ordered as a separate item.

*Equipped with hasp, staple and pin the same as No. 1336 type telephones. Ringer is disconnected from the line when door of telephone is closed.

†Generators have special mounting brackets.

Western Electric Portable Magneto Telephones

No. 1330E
Closed



No. 1330E
Open

Nos. 1330 and 1331 Types

These are complete magneto telephones mounted in substantial wooden cases. They are primarily for use in railway service and are designed to witnstand the jarring and rough handling incident to train service. In addition to railway service these telephones are suitable for any service where a substantial type of portable telephone is required. While these telephones are not waterproof they are designed to withstand ordinary weather conditions.

The Nos. 1330F and 1331F telephones are equipped with a six-foot waterproof cord and No. 146 plug for connecting them to a telephone line through a No. 186 pole jack.

The Nos. 1330E and 1331E telephones are intended primarily for use where connection to the line will be made with a line pole.

No. 1375 Type

The No. 1375B is especially adapted for use in cases where the telephone user must carry the telephone considerable distances. While it is primarily intended for use on moderately loaded lines, the design of the generator is such that it may be satisfactorily operated on heavily loaded lines.

The generator, induction, coil buzzer and terminal block are mounted on an aluminum frame and secured in the case by means of machine screws.

The case is made of high grade leather and is designed to withstand considerable rough handling.

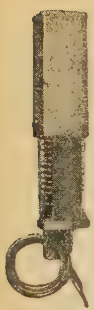
Code No.	Hand Set	Plug	Cord for Plug	Ringer or Buzzer Code No.	Ringer or Buzzer Resistance (Ohms)
1330E	1001C	None	None	32BG Ringer (A.C.)	2500
1330F	1001C	No. 146	No. 509 6-ft.	32BG Ringer (A.C.)	2500
1331E	1001C	None	None	3B Buzzer (A.C.)	2500
1331F	1001C	No. 146	No. 509 6-ft.	3B Buzzer (A.C.)	2500
1375B	1001H	....		D-21141 Buzzer (A.C.)	2150

Code No.	Generators Code No.	Generators Current	Ind. Coil	Condenser	Battery Used*	Approx. Wt.Lbs.
1330E	48A (5 Bar)	A.C.	29	21F	2 Blue Bell Dry Cells*	28
1330F	48A (5 Bar)	A.C.	29	None	2 Blue Bell Dry Cells*	28
1331E	22A (3 Bar)	A.C.	29	21F	2 No. 790 Eveready batteries*	17
1331F	22A (3 Bar)	A.C.	29	None	2 No. 790 Eveready batteries*	17
1375B	29E	A.C.	D-17624	None	One No. 703 Eveready Battery*	10½

Code No.	Over All Dimensions In.	Line Conditions as Regards Load	Signalling
1330E	12½x13½x5¼	For heavily loaded lines	Telephone signals and is signalled by code ringing
1330F	12½x13½x5¼	For heavily loaded lines	Telephone signals and is signalled by code ringing
1331E	11½x10½x4¾	For lightly loaded lines	Telephone signals and is signalled by code ringing
1331F	11½x10½x4¾	For lightly loaded lines	Telephone signals and is signalled by code ringing
1375B	9¾x 7¼x4¼	Medium and heavily loaded	Telephone signals and is signalled by code ringing

*Batteries are not included in the price of the telephone and are furnished only when specified in the order.

Western Electric Cable Terminals



Type C

A No. 22 A.W.G. cable stub 6½ feet long will be furnished on Nos. C-10 and C-16 unless otherwise specified. A 7-foot, No. 22 A.W.G. cable stub will be furnished with No. C-26 unless otherwise specified.

Code No.	No. of Pairs	Height Inches	Replaces
C-10	10	12¾	8A
C-16	16	14⅝	8B & 8D
C-26	26	17¾	8C & 8E

No. 14 Type
Without Protectors

This is for open wire distribution from lead-covered aerial cable, and is intended to be mounted on poles or buildings. No arrangement is made for protective devices. A 6-foot No. 22 A.W.G. cable stub is standard.

Code No.	Capacity Pairs	Length Including Nipples Inches	Width of Cover Inches
14B	11	9	7 7/16
14C	16	11 17/32	7 7/16
14D	26	16 3/32	7 7/16

No. 18 Type
With Protectors

This is a protected terminal for open wire distribution from lead-covered aerial and underground cable. Inclosed in a black finished galvanized iron cover approximately 8 9/16 inches in diameter, provided with a safety chain fastened to the mounting base.

Arranged for mounting on poles. Equipped with: No. 7A Fuses (7 ampere unless otherwise specified). No. 1 Protector Blocks. No. 2 Protector Blocks. No. 3 Protector Micas.

A 6-foot No. 22 A.W.G. cable stub is standard.

Code No.	Capacity Pairs	Length Inches	Code No.	Capacity Pairs	Length Inches
18A	10	19 9/32	**18D**	30	33 1/32
18B	15	22 1/32	**18E**	50	46 25/32
18C	25	28 29/32	**18F**	60	53 21/32

Western Electric Telephone Cords

There is a Western Electric cord to fit any telephone set or switchboard. If none of the cords described below meet your requirements, write us, sending if possible a sample cord or a sketch, paying particular attention to the kind of tip required.

Always specify length of cord when ordering.

Wall Telephone Receiver Cords

Code No.	Tinsel Cord	Brown Covering	No. Cord Tip Receiver End	No. Cord Tip Set End	Standard Length Feet
10	2-Conductor	Silk	29	62	2½ and 6
R2A	2-Conductor	Silk	103	103	2½
460	2-Conductor	Silk	29	29	2¼

Used with receiver on wall set.

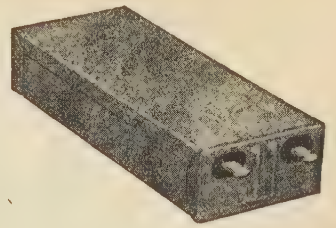
Desk Stand Cords

Code No.	Tinsel Cord	Brown Covering	No. Cord Tip Receiver End	No. Cord Tip Set End	Standard Length Feet
549	2-Conductor	Silk	29	103	2½
T1A	1-Conductor	Cotton	98	103	1
550	3-Conductor	Silk	..	...	5½ or 8

No. 549 is used with receiver and No. T1A is used with transmitter on Nos. 1020 and 1040 Desk Stand. No. 550 is used with stand to connect with desk set box.

Western Electric Unmounted Condensers

No. 21 Type

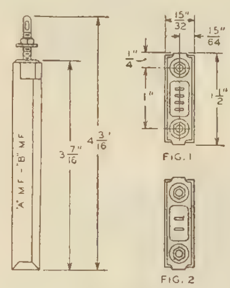


No. 21

Code No.	Rated Capacity	Voltage Tested On, A.C.	Use
21H	0.1	1200	No. 85 Type Interrupter
21AA	1.0	1000	Railway Sets
21AK	0.5	1000	Telegraph

No. 142 Type

Code No.	Capacity Min.	Capacity Rated	Capacity Max.	Voltage Tested On A.C.	Use
142B	.25	.25	.32	1000	Telegraph
142D	.05	.05	.06	1000	Railway Sets



No. 142

No. 142B Type replaces Nos 21Y and 21AL Condensers.

No. 142D Type replaces No. 21U Condenser.

The No. 142 Type Condensers require one No. 27A Bracket when mounted in place of the No. 21 or similar type condensers.

Arranged to mount on ½-inch horizontal and 1¾-inch vertical centers. Furnished with two nuts and washers for mounting.

Safe continuously applied voltage, either d.c. or effective a.c. at 60 cycles or less and of an approximate sine wave, is 300 volts.

Nos. 147 and 149 Types

The Nos. 147 and 149 Type Condensers are equipped with mounting tabs at lower edge of condenser and may be mounted by means of this tab and a mounting strap.

Safe continuously applied voltage, either d.c. or effective a.c. at 60 cycles or less and of an approximate sine wave, is 180 volts.

If No. 147 Type Condenser when substituted must fill space of No. 21 Type, order should specify P-409555 Adapter, and for the No. 149 Type Condenser, specify P-409556 Adapter.

Code No.	Capacity M.F. Stamped At Max.	A	B	Min.	Voltage Tested On D.C.	Use	Replaces
147A	2.50	...	2.0	2.0	500	General	Nos. 21D, E & L
147B	1.25	1.0	...	1.0	500	General	No. 21BG
	1.25	...	1.0	1.0			
***147C**	1.25	1.0	...	1.0	500	Composite	No. 21AD
	1.25	...	1.0	1.0			
***147D**	1.25	1.0	...	1.0	500	Coil Racks	No. 21N
	.62	...	.5	.5			

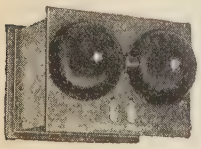
*Values stamped at "A" are measured between terminals 1 and 2, and values stamped at "B" are measured between terminals 1 and 3.

Code No.	Capacity M.F. Max.	Rated	Min.	Voltage Tested On D.C.	Use	Replaces
149A	1.25	1.0	1.0	500	General	Nos. 21F, K, W & BW
149B	.62	.5	.5	500	General	Nos. 21AC & AS
149C	.13	.1	.1	500	General	No. 21R
149D	.80	.65	.65	500	General	No. 21BF

Western Electric A. C. Extension Bells

Intended for auxiliary use in connection with wall, desk or telephone arm telephones. They consist of a ringer on a suitable mounting and two line terminals or binding posts. For magneto bridging non-selective service only.

No. 127 Type



Ringer mounted in an oak box. Approximate dimensions, width 6½ inches; height 4⅞ inches; depth 4⅝ inches.

Code No.	Ringer No.	Resistance Ohms
127E	38AG	1020
127F	38BG	2500
127G	38FG	1620

No. 392 Type

Moisture-proofed loud ringing bells having a black finish metal cover and base with galvanized finish gongs.

When the extension bell is to be used on a central battery line a 2 M.F. condenser must be connected in series with the ringer coils.

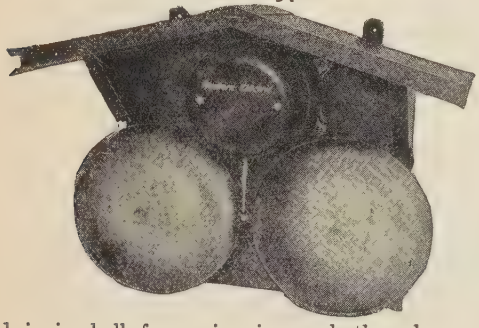
Base is arranged for mounting a No. 21D condenser. Condenser is not furnished, however, unless so ordered.

The connecting leads to the ringer coils are so arranged that the condenser can be easily connected in series with the ringer without disturbing the line wires when desired.

Code No.	Resistance Ohms	Diameter Gongs, In.
392A	1000	6
392B	2500	6
392E	1600	6
392G	1000	8
392H	2500	8

Biasing attachment for selective ringing can be added.

No. 342 Type



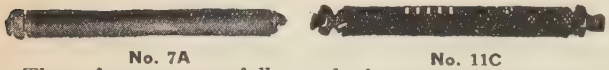
Loud ringing bells for use in mines and other places where a bell protected from weather is desired. Consists of a No. 392 type bell mounted on a No. 149A backboard having a sloping roof which protects the bell.

Code No.	Bell Used	Resistance Ohms	Diam. Gongs, In.	Code No.	Bell Used	Resistance Ohms	Diameter Gongs, In
342G	392G	1000	8	342J	392A	1000	6
342H	392H	2500	8	342K	392B	2500	6

Western Electric Tubular Fuses

Fiber Shell Type

No. 7T



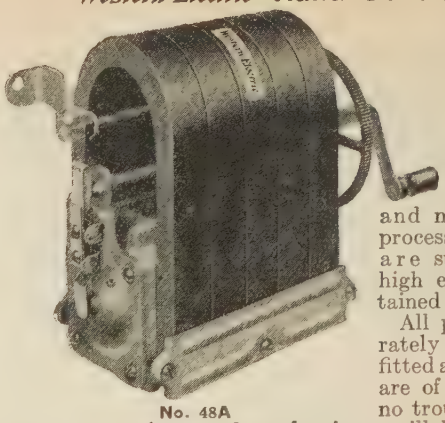
No. 7A

No. 11C

These fuses are carefully made from especially selected materials. The use of lead fuse wire prevents the possibility of overheating the shell. These fuses will carry their rated currents indefinitely without injury and will act reliably on one and one-half times their rated current values. Fuses of the same code number and rated capacity will give consistent performance as to rated and operating current values.

Code No.	Rated Capacity Amperes	Used with
7A	1 to 7 as Specified	Nos. 61, 77, 1074A and 1078 Protectors
7T	7	B Cable Terminals.
11C	7	Nos. 58AP and 1079AP Protectors

Western Electric Hand Generators



No. 48A

Western Electric hand generators are correct in both mechanical and electrical design and the materials used and manufacturing processes employed are such that their high efficiency is retained indefinitely.

All parts are accurately machined and fitted and the bearings are of such size that no trouble due to the armature scraping on the pole pieces will be encountered even after years of service. The gears are accurately cut.

All metal parts are given a protective finish and the armature winding is moistureproofed. The magnets are made from steel which was developed especially for this purpose.

No. 22 Type Generators

The No. 22 type generator is used on lightly loaded magneto lines and may be obtained for alternating or pulsating current.

These generators have three magnets except the No. 22E, which has only two.

No. 29 Type Generators

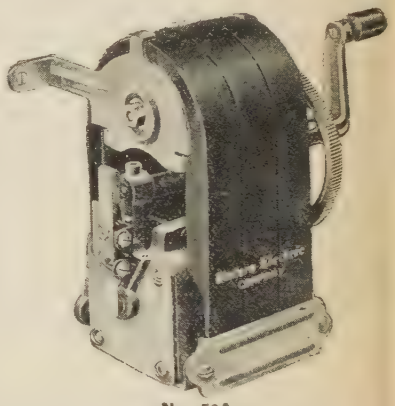
The No. 29 type generators are used where light weight is essential as in linemen's test sets, and portable telephones.

No. 48 Type Generators

The No. 48 is our most powerful hand generator and is used in telephone for heavily loaded line service.

No. 50 Type Generators

The No. 50 type generator was designed for use on moderately loaded lines and while it only has three magnets, it is considerably more powerful than a good many five-bar generators on the market, and will be found satisfactory for use on all but the very heaviest loaded lines. On a line of 12000 ohms, the No. 50 generator will operate six 2500 ohms Western Electric ringers and will operate thirty-five 2500 ohms Western Electric ringers on a line of about 1000 ohms.



No. 50A

The No. 50 generator is approximately 75% as powerful as the No. 48 type.

Western Electric Hand Generator Boxes

A hand generator box consists of a generator mounted in an oak cabinet having a hinged cover.

The leads from the generator are connected to terminals mounted close to the inside edge of the box.

Code No.	Generator	Current	Dimensions of Box, Inches: Width	Depth	Length
299F	48A	A. C.	8	6	9
299G	48B	A. C. and P. C.	8	6	9
303G	50A	A. C.	7 29/32	4 13/32	8 1/8

No. 1001 Type *Western Electric* Hand Sets

No. 1001A

The No. 1001 type hand sets have been manufactured for over fifteen years. They were originally intended for the use of linemen and are designed to withstand the rough handling, incidental to such service. This design proved to be so satisfactory that it is now used extensively for a number of different purposes, as described below.

The handles are made of brass tubing with drawn brass end pieces and the transmitters and receivers are provided with drawn brass cases equipped with screw clamping rings, thereby making an instrument that is extremely rugged.

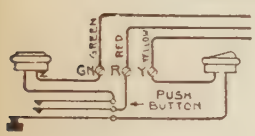
The No. 1001-C, and H hand sets are provided with a push button switch which is connected so that these hand sets function the same as the No. 1020-AL desk stand. In view of this, they may be used in connection with our regular magneto and central battery desk set boxes in place of a desk stand, in cases where the service conditions are such that a hand set is required. These hand sets have a nickel-plated finish.

No. 1001A

Used by linemen as a test set on central battery lines. The cord is equipped with spring connection clips.

Code No.	Transmitter	Receiver	Cords: Code No.	Cords: Length	Push Button Spring Combination
1001A	244	131	243	8 in.	None
			574	2½ ft. (Waterproof)	

Nos. 1001C and 1001H



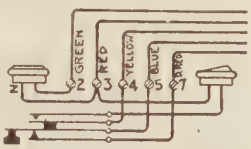
No. 1001C is used with Nos. 1330 and 1331 portable magneto telephones.

No. 1001H is used with No. 1375B portable magneto telephone.

Code No.	Transmitter	Receiver	Cords: Code No.	Cords: Length	Push Button Spring Combination
1001C	285	131	366	6 ft. (Waterproof)	2 Make
1001H	244	131	422	5 ft. 2 in. (Waterproof)	2 Make

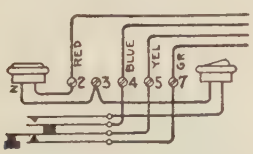
No. 1001E

Used with desk type Inter-phones where 5-conductor cord is required.



Code No.	Transmitter	Receiver	Cords: Code No.	Cords: Length	Push Button Spring Combination
1001E	244	131	398	6 ft.	1 Make and 1 Break

No. 1001J



No. 1001J is used with desk type Inter-phones.

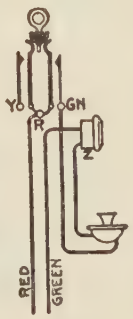
Code No.	Transmitter	Receiver	Cords: Code No.	Cords: Length	Push Button Spring Combination
1001J	244	131	502	6 ft.	1 Make and 1 Break

No. 1002 Type *Western Electric* Hand Sets

No. 1002AC

The transmitter and receiver of the No. 1002 type hand sets are mounted on a nickel plated tubular brass frame, equipped with a hard rubber handle. A switch mounted within the frame is actuated by a plunger which terminates in a ring by which the hand set is suspended, when not in use. When the hand set is removed from the hook, the switch is automatically closed. These hand sets function the same as certain desk stands, and, therefore, may be used in place of desk stands, if required. A hook (No. 141A switchhook) is furnished with each hand set.

NO. 1002-D



NO. 1002-E

NO. 1002-AC

No. 1002D

Used in place of desk stands and telephone arms in connection with Interphones. Also for general use.

Code No.	Transmitter	Receiver	Cords: Code No.	Cords: Length	Switch Combination
1002D	267	141	336	14 ins.	1 make and 1 break
			402	8½ ins.	
			429	4 ft. 6 ins. (4 conductors)	

No. 1002E

Used in connection with a janitor's switchboard in apartment house equipment. Also for general use.

Code No.	Transmitter	Receiver	Cords: Code No.	Cords: Length	Switch Combination
1002E	267	141	402	8½ ins.	2 make contact
			336	14 ins.	
			430	4 ft. 6 ins. (2 conductors)	

No. 1002AC

Used in place of local battery bridging or central battery desk stands. Functions same as No. 1040AL desk stand. Also No. 1801 swbd.

Code No.	Transmitter	Receiver	Cords: Code No.	Cords: Length	Switch Combination
1002AC	267	141	318	4½ ft. (3 conductors)	2 make
			414	4¼ ins.	
			415	9½ ins.	

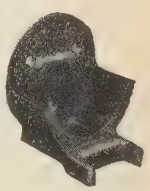
No. 1003 Type Hand Sets

NOTE.—The No. 1003 type hand sets are listed under Interphones.

Western Electric Hand Set Hangers

No. 1B mounts on a vertical surface for holding a No. 1001 type hand set when not in use. The hand set is suspended by its receiver, which fits into a recess in the hanger. Cast brass; black finish. Overall dimensions, 3 1/16 inches wide, 2½ inches deep and 3⅜ inches high.

No. 1C is the same as the No. 1B, except that it is equipped with rubber studs and a spring, so arranged as to prevent the hand set from swaying. Used principally on steamships.



No. 1B

Western Electric Desk Set Boxes

Nos. 300 and 315 Types

For Use with Desk Stands, Telephone Arms, Etc., on Magneto or Central Battery Lines

Used with No. 1020AL desk stand and Nos. 1020CC, 1048AA, AB and AC telephone arm. Oak boxes equipped with induction coil, and with ringer, generator and condenser as indicated below.

Ringers Operated by A.C.

Code Ringing

Code No.	Ringer Resistance Ohms	Type Generator	Condenser	Service
315H	1020	No. 22 (3 Bar A.C.)		Light Loaded Lines
300K	2500	No. 48 (5 Bar A.C.)		Heavy Loaded Lines
300N	2500	No. 48 (5 Bar A.C.)	1 Mf.	Heavy Loaded Lines
300L	1620	No. 48 (5 Bar A.C.)		Medium Loaded Lines
300M	1620	No. 48 (5 Bar A.C.)	1 Mf.	Medium Loaded Lines

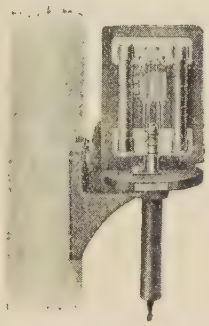
No. 1020AL *Western Electric* Desk Stands

For regular bridging magneto or common battery service. Insulated transmitter.

Includes one No. 20AL Desk Stand, one No. 323 Transmitter, one No. 144 Receiver and cords.

Black Japan finish.

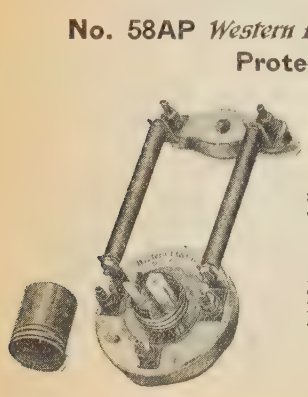
No. 186 *Western Electric* Weatherproof Telephone Jacks



Weatherproof jack designed for mounting poles; affords a means of connecting a portable telephone to the line. Contains protective apparatus.

Lock will be furnished if specified in order.

No. 58AP *Western Electric* Telephone Protectors

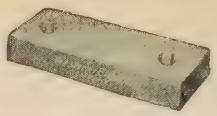


Designed for protection against lightning and crosses with electric circuits.

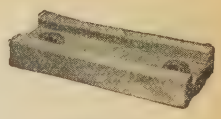
Consists of two No. 11C-7 Ampere Fuses, two each Nos. 26 and 27 Protectors and Nos. 16, 29 and 48 Mountings.

Western Electric Telephone Protector Blocks

Nos. 19 and 20



No. 19

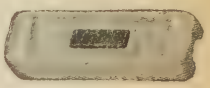


No. 20

Code No.	Description	Used with: Protector Blocks, No.	Protector Micas, No.	Protectors, Nos.
19	Plain Copper Block with Two Pins	20	10	58B,60B
20	Grooved Copper Block with Two Bushings	19	10	58B,60B

Nos. 26 and 27

No. 26



No. 27

Provides better telephone service through fewer interruptions of operation. They are used together without a separator (protector mica) and form an open space cutout which will afford the highest grade of protection against high potentials due to lightning.

The No. 26 protector block is a solid piece of hard non-dusting carbon. The face of the block is especially ground to present a smooth surface. The No. 26 protector block is mounted on the ground side of the protector mounting.

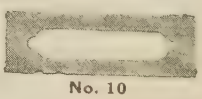
The No. 27 protector block consists of a porcelain frame with a countersunk hard carbon plug which is fastened in place with low temperature fusing cement. The surface of the frame which bears against the No. 26 block, when assembled in a mounting, is finished by grinding. The air gap between the carbon insert in the No. 27 block and the face of the No. 26 block is held to close limits by this grinding process and the consistent operation of the cutouts at the proper voltage is thereby insured.

Ordinary lightning discharges will cause an arc across the air gap between the carbon blocks but will not heat them sufficiently to melt the cement used for holding the carbon plug in place. A cross with an electric light or power line, however, will cause a discharge or repeated discharges, of such duration that the heating of the carbon insert of the No. 27 blocks will melt the cement holding it in place and allow the mounting spring to push it into direct contact with the No. 26 block, thus permanently grounding the line.

Code No.	Description	Used with Protectors, Nos.
26	Carbon Block	12AP, 58AP, 60AP, 76AP, 1268A and 1269A
27	Porcelain Frame with Carbon Insert	12AP, 58AP, 60AP, 76AP, 1268A and 1269A

The new blocks are interchangeable with the old combinations of No. 1 protector block, No. 2 protector blocks and No. 3 protector mica in all subscribers' set protector mountings and are therefore available for improving protective equipment already in service, during the normal replacements. All orders for replacements of Nos. 1 and 2 blocks and No. 3 micas in subscribers' telephone station protectors should specify the Nos. 26 and 27 protector blocks; no separator (protector mica) is needed with the new design of block.

Protector Micas

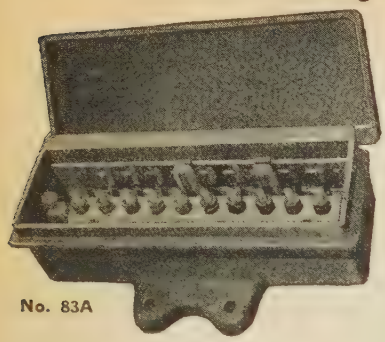


No. 10

Code No.	Used with: Protector Blocks, Nos.	Protectors Nos.
10	19, 20 and 21	58B, 60B and 80A
11	19 and 20	178

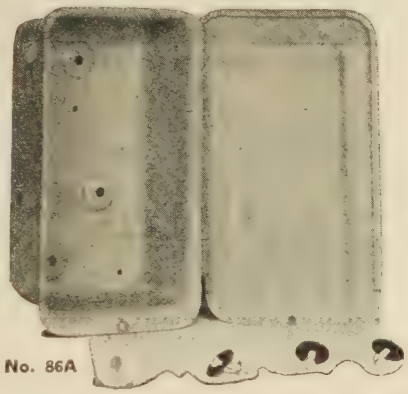
No. 11 mica is twice as thick as the No. 10.

Western Electric Telephone Protector Mountings


No. 83A

No. 83A is designed to protect drop wires between the overhead lines and the subscribers telephone set from lightning. This protector mounting consists of an iron box approximately 8 11/16 x5 x2 3/4 inches deep with a cover and having a No. 84A protector mounted within it. Arranged to mount 10 pairs of No. 26 and 30 protector blocks. This protector mounting provides for the protection of 5 pairs of wires. The box mounts directly underneath the crossarms on the poles. Two mounting lugs are provided for this purpose.

No. 86A is for housing the 58 type protector where outside installation is desired. Consists of a galvanized iron metal box having a sliding cover with locking screws. Three screws are furnished for mounting the protector in the box. Size, 10 inches long, 5 31/32 inches wide, 3 1/4 inches deep.


No. 86A

Western Electric Hand Receivers

No. 144

With hard rubber case.

Cord not included; order separately.

Western Electric Head Receivers

No. 528

Standard biopolar head receiver, brass case with improved wire type headband.

Used with operator's telephone set and all switchboards.

Western Electric Ringers

No. 53 Type

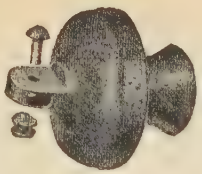
Have gong posts suitable for 5/8-inch woodwork; spacers can be furnished to adapt the No. 53 type to 3/8-inch woodwork and the No. 38 to either 3/8 or 1/2-inch woodwork. Black finish gongs are furnished as standard, but nickel finish gongs can be supplied.

Used with central battery (magneto) telephones.

Code No.	Approx. Resistance Ohms	Gongs: Code No.	Gongs: Diam. Inches	Mounts In Woodwork Inches
38AG	1020	26A	3	5/8
38BG	2500	26A	3	5/8
38FG	1620	26A	3	5/8
53AG	1000	29A	2 1/2	5/8
53BG	2500	29A	2 1/2	5/8
53FG	1600	29A	2 1/2	5/8

Western Electric Transmitters

No. 323



High resistance, insulated transmitter. Provided with mounting lug and clamping bolt. Black finish.

Designed for use on magneto and central battery desk stands and telephone arms

No. 353

High resistance, insulated, bracket type transmitter.

Black finished all over.

Designed for use on magneto and central battery wall telephones, requiring a bracket type transmitter.

Western Electric Testing Sets

Type 90500

No. 90530

Each set consists of a hand generator and a ringer, wired in series, and inclosed in a wooden case.

Code No.	Will Ring Through Ohms	Consists of
90530	10000	1 No. 22K Generator 1 No. 19B Ringer
90510	35000	1 No. 22K Generator 1 Special No. 19 Ringer
90511	50000	1 No. 22N Generator 1 No. 19A Ringer
90512	100000	1 No. 22N Generator 1 No. 19B Ringer

Size of case is 5 3/4 x6 5/8 x5 1/4 inches.

It is finished in birch.

No. 1017 Type *Western Electric* Test Sets

No. 1017 Type

No. 1017B

A wooden box telephone test set equipped with a regular local battery talking circuit consisting of a No. 266 transmitter, No. 13 induction coil, No. 189 receiver and a special three-cell dry battery unit.

NOTE.—The No. 1017C test set differs from the No. 1017B only in that it is equipped with a specially designed high efficiency generator. The No. 1017B will, under ordinary conditions, be found entirely satisfactory, but in case a more powerful set is required to meet unusual conditions, the No. 1017C set has been developed.

No. 1017B. For lightly loaded lines—it will ring 15, 2500 ohm bells over a 15 mile No. 12BB iron metallic line.

Code No.	Weight Including Battery Pounds	Size of Case Inches	Finish
1017B	8	4 27/32 x6 3/32 x7 27/32	Birch Mahogany

No. 1017C. For moderately loaded lines—it will ring 33 2500 ohm bells over a 15 mile No. 12BB iron metallic line.

1017C	8	4 27/32 x6 3/32 x7 27/32	Birch Mahogany

Western Electric Lead Covered Telephone Cable

The outside plant is a very important part of any telephone system. Unless satisfactory material is used in its construction, it is impossible for a telephone company to furnish satisfactory service even though the central office and substation equipment is of the best. Lead covered cable represents not only a large part of the capital invested in the outside plant, but also a most important part of the construction due to its function of being the transmitting medium for telephone messages.

There are certain characteristics which lead covered cable must possess in order to properly and efficiently function in a telephone system:—

1. It must be so constructed that it will have long life and thereby reduce depreciation to a minimum.
2. It must be designed to transmit telephone messages with a minimum transmission loss.

The Western Electric Company manufactures cable designed to conform to the above requirements and by virtue of the fact that its experience in this field covers the entire period since the first successful installation of lead cable for telephone use, its product is as nearly perfect as present day knowledge of the telephone art permits.

The Western Electric Company occupies an important position in the manufacture of lead covered cable for telephone use by virtue of the following facts:

1. It is the largest manufacturer of this commodity.
2. It has specialized on, and developed this product since its origin.
3. It manufactures for the largest users.
4. It is responsible for practically every important development and improvement.
5. Conscientious careful inspection and testing make sure that specifications are rigidly adhered to.
6. The design and development work is done by the largest force of telephone experts in the world.

Cable for aerial and underground telephone use is composed of copper conductors, insulated with paper, twisted into pairs and enclosed in a lead sheath. In general, cable with single wrapped conductors is recommended, since its electrical and mechanical characteristics are perfectly satisfactory for most conditions, and the cost is less than cable with double wrapped conductors.

The sheath is made of pure lead, lead antimony alloy or lead tin alloy. Experience has shown that while either lead antimony or lead tin is satisfactory for aerial or underground cable, the former alloy, being somewhat cheaper, is more generally used. While pure lead cannot be recommended where the cable is subjected to vibration, it is satisfactory for use within buildings.

Extra Pairs

Extra pairs are placed in all cables containing conductors smaller than No. 16 to take care of any pairs which may become defective in manufacture. In the majority of cables all or part of the extra pairs will often be found good and may be used for additional circuits. All pairs of No. 16 A.W.G. and larger except in submarine cable are guaranteed to meet the specification requirements when the cable leaves our factory.

The coding of all cables is on the basis of the actual number of pairs. Actual and guaranteed numbers of pairs in the various sizes of standard cables containing conductors smaller than No. 16 A.W.G. are as follows:

Actual Pairs	Guaranteed Pairs
6 to 149	Actual pairs less one
150 " 249	" " " two
250 " 349	" " " three
350 " 449	" " " four
450 " 505	" " " five
606	" " " six
909	" " " nine
1212	" " " twelve
1818	" " " eighteen

Western Electric Lead Covered Telephone Cable

Continued

Cable Yard at Hawthorne Works

Transmission

The transmitting efficiency of telephone cable, considered as a separate unit, depends principally upon its capacitance and conductor resistance. When telephone cable forms a portion of a completed telephone connection, the transmitting efficiency of the telephone connection as affected by the cable portion depends somewhat on the relative position of the cable in that circuit and also by the type of other construction to which it is connected.

The following data are based upon average standard conditions, and may be used for approximate calculations. In the case of circuits involving several different types of construction, we recommend consulting our engineers.

A length of circuit which, when connected to short subscribers' loops, will cause a transmission loss of about 30 db (units of transmission loss, called decibels) is considered about the maximum length over which commercial transmission can be secured.

One db represents approximately the loss found in the following:

3.2 miles of No. 12 B.W.G.—B.B. galvanized iron circuit.
4 miles of No. 10 B.W.G.—B.B. galvanized iron circuit.
8 miles of No. 14 N.B.G. or No. 12 A.W.G. hard drawn bare copper circuit.
13 miles of No. 12 N.B.S. hard drawn bare copper circuit.

It then follows that 96 miles is about the theoretical commercial limit for No. 12 B.W.G.—B.B. galvanized iron wire circuit.

Under each listing is given the respective transmission loss or attenuation in db per mile of cable.

Capacitance

The capacitance of a cable circuit is important because it limits to a large extent the length of cable through which it is possible to transmit speech. The capacitance may be specified either as mutual, that is, the capacitance between the two wires or a pair; or as grounded, that is, the capacitance between a wire and all the other wires and the sheath. Mutual capacitance is preferable in defining the quality of the cable for telephone transmission, since the conductors are used in pairs as metallic circuits and seldom, if ever, singly as grounded lines. The grounded capacitance is about 1.6 times the mutual, but this ratio varies somewhat for different cables.

Capacitance may be measured by the d.c. charge method, the d.c. discharge method, or the a.c. method. The a.c. method, using a frequency of 800 cycles or higher, is preferable because it measures the true capacitance for the voice currents. The d.c. capacitance tends to be higher than the a.c. capacitance, and in specifying capacitance this fact should be recognized. The d.c. charge method is less subject to error due to improper manipulation of the testing equipment than the d.c. discharge method, and is therefore a more desirable testing procedure for d.c. testing.

Western Electric Cables are tested for mutual capacitance by the a.c. method, unless specifically requested otherwise.

Western Electric Lead Covered Telephone Cable

Continued

Special Cables

Special conditions often require cables with different characteristics from those which have been standardized and coded. Paper insulated cable, designed to withstand test potentials up to 1500 volts a.c., is supplied for special circuits such as for telegraph or signal circuits. If your condition necessitates special cable, write our nearest house, giving full details and information, and price will be furnished.

Submarine Cables

Paper insulated submarine telephone cable may be divided into three general classes, depending upon the use for which they are intended.

1. High dielectric strength, tight core cable, designed for use in comparatively long lengths, where the cost of repairing a break in the cable will be less than the cost of an entirely new cable.
2. High dielectric strength, loose core cable, designed for use in comparatively short lengths, where high transmission efficiency and high dielectric strength are of importance; for example: a short river crossing cable connecting important open wire.
3. Single paper insulated loose core cable designed for use in comparatively short lengths where so high a dielectric strength is not necessary; for example: a short river crossing cable connecting land cables.

Either single or double armored cable can be furnished. In many cases, single armor gives sufficient mechanical protection. Double armor is used only in cases of extremely severe mechanical requirements. In still water with a mud bottom, single armor will be sufficient. With a rocky or uneven bottom, or with strong tides or currents, double armor should be considered.

Composite Cables

Composite cable, that is, composed of conductors of two or more gauges can be furnished if desired. The combinations of pairs which will utilize the space within the lead sheath most economically are somewhat limited and our cable engineers will make recommendations along this line upon receipt of detail information as to the conditions to be met.

Terminating Cables

Paper insulated cables are usually terminated in buildings by splicing on a short piece of textile insulated cable. Commercial textile yarns are liable to contain soluble salts, which will cause electrolytic action when exposed to moist atmospheres and result in poor insulation and sometimes produce corrosion of the conductors. It has been found that by removing such impurities substantial improvements of the insulating properties of the textiles are obtained. Only purified textiles are used in Western Electric Cables.

The uses of the several types of textile insulated cables listed in the tables following are discussed briefly below.

Types FA and GA cables are generally used for terminating. In Type FA cable all pairs, except a tracer pair, have the same colors of insulation. In Type GA cable each pair is distinguishable from every other by a color code. These two types of cable are made up of wires covered with two servings of silk and an outer serving of cotton.

Type AUA has conductors covered with two servings of cotton and an outer film of lacquer. This type of cable should be used where there would be objections to the usual method of waxing the exposed insulated conductors during installation. It replaces Type UA cable.

Types MFA, MGA, and NUA are similar to Types FA, GA, and AUA respectively, except that the conductors are enameled. The enameled cables are intended for the same kinds of service as the other three types, but are used where the humidity may be quite high for rather long periods, as, for example, near the sea coast in warm climates.

Cables with wool insulated conductors were once used for terminating, but it has been found that the cables described above are equally satisfactory for this purpose and are less expensive and easier to handle.

Western Electric Lead Covered Telephone Cable

Continued

Cables for Burying Directly in the Ground

There are many situations where cables buried directly in the ground would offer advantages over other forms of construction. The life of unprotected cable sheath may be very short, depending upon the particular soil conditions. To meet this need, the Western Electric Company have developed a type of covering for the cable sheath which effectively protects the sheath from soil corrosion. This protection consists of wrappings of paper and jute which have been thoroughly impregnated with preservative compound and which are thoroughly flooded with asphaltic compound while being applied to the cable. Cables having this type of covering are referred to as jute protected. In cases where somewhat more mechanical protection is desired or where some protection against low frequency induction from power lines is desired, a steel tape armor can be furnished. This type of sheath covering is similar to that used for the jute protected cables except for the addition of the steel tapes and a further covering of asphalt flooded jute.

Jute protected cables are about $\frac{5}{32}$ inch larger in over-all diameter than the unprotected cables for the smaller sizes and about $\frac{11}{32}$ inch larger for full size cables. For the tape armored cables, the increase in diameter varies with the size of the cable from about $\frac{1}{4}$ inch to about $\frac{9}{16}$ inch. Any lead covered cable can be furnished either jute protected or tape armored if so noted on the order.

Recent Developments

A new form of paper insulation has been developed by the Western Electric Company which is known as pulp insulation because of its method of application to the wire. The paper is made directly on the conductor in such a way as to form a continuous, seamless tube.

A new method of constructing cable cores, known as the multiple unit design, has also been developed by the Western Electric Company. Units of 50 or 100 pairs are first separately stranded and then these units are cabled together to form the completed core. This construction offers a distinct advantage in splicing in that the color groups are units and require practically no time for separating in preparation for splicing.

No. 26 gauge cables, coded as Type AST, No. 24 gauge cables, coded as Type CSM, and No. 22 gauge cables coded as Type CSA are now regularly furnished with pulp insulation for all sizes and with the multiple unit design in sizes of 152 pairs and larger.

Type CSA Cable

For Aerial or Underground Use

SHEATH.—Lead antimony.

CONDUCTORS.—No. 22 A.W.G., pulp insulation, with color groups depending upon size.

MUTUAL CAPACITANCE.—A.C. testing, .090 microfarad per mile of cable.

CONDUCTOR RESISTANCE.—Not exceeding 92 ohms per mile of cable at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 500 volts.

ATTENUATION.—1.8 decibels per mile at 1000 cycles.

Code No. and No. of Pairs	No. of Pairs Guaranteed	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reel
CSA- **11**	10	.070	.44	.45	3500
CSA- **16**	15	.070	.48	.52	3500
CSA- **26**	25	.070	.58	.67	3500
CSA- **51**	50	.070	.73	.95	3000
CSA- **76**	75	.075	.87	1.27	2500
CSA-**101**	100	.080	.99	1.58	2500
CSA-**152**	150	.080	1.16	2.03	1600
CSA-**202**	200	.085	1.33	2.55	1600
CSA-**303**	300	.095	1.60	3.58	1400
CSA-**404**	400	095	1.78	4.28	1200
CSA-**606**	600	105	2.15	6.02	900
CSA-**909**	900	.115	2.61	8.50	650

Western Electric Lead Covered Telephone Cable

Continued

Type CSM Cable

For Aerial or Underground Use

SHEATH.—Lead antimony.

CONDUCTORS.—No. 24 A.W.G. pulp insulation, with color groups depending upon size.

STRANDING.—Multiple-unit design 152 pairs and larger.

MUTUAL CAPACITANCE.—A.C. testing, .080 microfarad per mile of cable.

CONDUCTOR RESISTANCE.—Not exceeding 145 ohms per mile of cable, at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 500 volts.

ATTENUATION.—2.2 decibels per mile at 1000 cycles.

Code No. and No. of Pairs	No. of Pairs Guaranteed	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
CSM- **11**	10	.070	.39	.38	3500
CSM- **16**	15	.070	.44	.45	3500
CSM- **26**	25	.070	.52	.56	3500
CSM- **51**	50	.070	.64	.77	3000
CSM- **76**	75	.075	.76	1.02	2500
CSM- **101**	100	.075	.85	1.20	2500
CSM- **152**	150	.080	1.00	1.59	2500
CSM- **202**	200	.080	1.14	1.91	1800
CSM- **303**	300	.085	1.36	2.56	1600
CSM- **404**	400	.090	1.56	3.22	1400
CSM- **606**	600	.105	1.90	4.69	1100
CSM- **909**	900	.115	2.29	6.51	900
CSM-**1212**	1200	.115	2.61	7.97	650

NOTE.—Type ASM available in single dry paper tape insulation, layer stranding.

Type AST Cable

For Aerial or Underground Use

SHEATH.—Lead antimony.

CONDUCTORS.—No. 26 A.W.G. pulp insulation, with color groups depending upon size.

STRANDING.—Multiple-unit design 152 pairs and larger.

MUTUAL CAPACITANCE.—A.C. testing, .080 microfarad per mile of cable.

CONDUCTOR RESISTANCE.—Not exceeding 230 ohms per mile of cable at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 500 volts.

ATTENUATION.—2.7 decibels per mile at 1000 cycles.

Code No. and No. of Pairs	No. of Pairs Guaranteed	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Stock Reel Length Feet
AST- **11**	10	.070	.36	.34	3500
AST- **16**	15	.070	.40	.40	3500
AST- **26**	25	.070	.45	.46	3500
AST- **51**	50	.070	.58	.64	3500
AST- **76**	75	.070	.66	.78	3000
AST- **101**	100	.070	.73	.91	3000
AST- **152**	150	.075	.87	1.20	2000
AST- **202**	200	.080	.97	1.47	2000
AST- **303**	300	.080	1.16	1.89	1600
AST- **404**	400	.085	1.33	2.36	1600
AST- **606**	600	.095	1.60	3.30	1400
AST- **909**	900	.105	1.90	4.56	1100
AST-**1212**	1200	.105	2.15	5.51	900
AST-**1818**	1800	.115	2.61	7.73	650

Western Electric Lead Covered Telephone Cable

Continued

Type CNB Cable

For Aerial or Underground Use

SHEATH.—Lead antimony.

CONDUCTORS.—No. 19 A.W.G. single dry paper tape insulation, with color groups depending upon size.

MUTUAL CAPACITANCE.—A.C. testing, .090 microfarad per mile of cable.

CONDUCTOR RESISTANCE.—Not exceeding 46 ohms per mile of cable, at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 700 volts.

ATTENUATION.—1.3 decibels per mile at 1000 cycles.

Code No. and No. of Pairs	No. of Pairs Guaranteed	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
CNB- **6**	5	.070	.44	.45	3500
CNB- **11**	10	.070	.53	.60	3500
CNB- **16**	15	.070	.61	.72	3500
CNB- **26**	25	.070	.72	.93	3000
CNB- **51**	50	.075	.95	1.46	2500
CNB- **76**	75	.080	1.14	1.98	1800
CNB-**101**	100	.085	1.30	2.48	1600
CNB-**152**	150	.090	1.56	3.37	1400
CNB-**202**	200	.095	1.78	4.25	1200
CNB-**303**	300	.105	2.15	5.98	900
CNB-**404**	400	.115	2.48	7.77	700
CNB-**455**	450	.115	2.61	8.46	650

Type NH Cable

For Aerial or Underground Use

SHEATH.—Lead antimony.

CONDUCTORS.—No. 16 A.W.G. single dry paper tape insulation. Blue orange pairs alternating with green orange pairs, except for 2 orange white tracer pairs, one in the center and one in the outside layer and a red orange pair in each layer containing an odd number of pairs.

MUTUAL CAPACITANCE.—A.C. testing .072 microfarad per mile of cable.

CONDUCTOR RESISTANCE.—Not exceeding 23 ohms per mile of cable, at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 1000 volts.

ATTENUATION.—.75 decibels per mile at 1000 cycles. All pairs guaranteed good.

Code No. and No. of Pairs	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
NH- **26**	.080	1.13	1.79	1500
NH- **51**	.090	1.52	2.94	1200
NH-**101**	.105	2.12	5.13	800
NH-**152**	.115	2.54	7.13	600

Western Electric Lead Covered Telephone Cable
Continued

Type FA Cable
For Inside Construction

SHEATH.—Pure lead.

CONDUCTORS.—No. 22 A.W.G. tinned, double silk and single cotton insulation, covering on each pair colored white and red white.

TRACER PAIR.—One in outer layer colored blue and white.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

CONDUCTOR RESISTANCE.—Not exceeding 96 ohms per mile of cable, at 68 degrees Fahrenheit.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 700 volts.

Code No. and No. of Pairs	No. of Pairs Guaranteed	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
FA-101	101	.063	1.00	1.42	2500
FA-152	151	.063	1.19	1.86	1600
FA-202	201	.094	1.41	2.93	1500
FA-303	302	.125	1.75	4.68	1200
FA-404	403	.125	1.97	5.62	1100
FA-606	605	.125	2.38	7.45	700

Type GA Cable
For Inside Construction

SHEATH.—Pure lead.

CONDUCTORS.—No. 22 A.W.G. tinned, double silk and single cotton insulation, colored in accordance with a standard color scheme so that each pair is distinguishable from other pairs in the cable.

CONDUCTOR RESISTANCE.—Not exceeding 96 ohms per mile of cable at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 700 volts.

Code No. and Guaranteed Pairs	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
GA- **6**	.047	.34	.25	3500
GA- **11**	047	.41	.32	3500
GA- **16**	.047	.47	.39	3500
GA- **21**	047	.52	.45	3500
GA- **26**	047	.56	.51	3500
GA- **31**	047	.59	.56	3500
GA- **41**	.047	.67	.67	3000
GA- **51**	063	.77	.94	2500
GA- **76**	.063	.89	1.19	2500
GA-**101**	.063	1.00	1.42	2500
GA-**152**	.063	1.19	1.86	1600
GA-**202**	.094	1.41	2.93	1500

Type AUA Cable
For Inside Construction

SHEATH.—Pure lead.

CONDUCTORS.—No. 22 A.W.G. tinned, double cotton lacquered insulation, colored in accordance with a standard color scheme so that each pair is distinguishable from other pairs in the cable.

CONDUCTOR RESISTANCE.—Not exceeding 96 ohms per mile of cable at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 700 volts.

Code No. and Guaranteed No. of Pairs	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
AUA- **6**	.047	.34	.25	3500
AUA-**11**	.047	.41	.32	1000
AUA-**16**	.047	.47	.39	1000
AUA-**21**	.047	.52	.45	1000
AUA-**26**	.047	.56	.51	1000
AUA-**31**	.047	.59	.56	1000
AUA-**41**	.047	.67	.67	3000
AUA-**51**	.063	.77	.94	2500

Western Electric Lead Covered Telephone Cable
Continued

Type MFA Cable
For Inside Construction

SHEATH.—Pure lead.

CONDUCTORS.—No. 22 A. W. G. tinned, black enamel, double silk and cotton insulation, covering on each pair colored white and red white.

TRACER PAIR.—One in outer layer colored blue and white.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

CONDUCTOR RESISTANCE.—Not exceeding 105 ohms per mile of cable, at 68 degrees Fahrenheit.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 700 volts.

Code No. and No. of Pairs	No. of Pairs Guaranteed	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
MFA-**101**	101	.063	1.00	1.42	2500
MFA-**152**	151	.063	1.19	1.86	1600
MFA-**202**	201	.094	1.41	2.93	1500
MFA-**303**	302	.125	1.75	4.68	1200
MFA-**404**	403	.125	1.97	5.62	1100
MFA-**606**	605	.125	2.38	7.45	700

Type MGA Cable
For Inside Construction

SHEATH.—Pure lead.

CONDUCTORS.—No. 22 A. W. G. tinned, black enamel, double silk and single cotton insulation, colored in accordance with a standard color scheme so that each pair is distinguishable from other pairs in the cable.

CONDUCTOR RESISTANCE.—Not exceeding 105 ohms per mile of cable, at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c. test potential whose maximum instantaneous value is 700 volts.

Code No. and Guaranteed No. of Pairs	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
MGA- **6**	.047	.34	.25	3500
MGA- **11**	.047	.41	.32	3500
MGA- **16**	.047	.47	.39	3500
MGA- **21**	.047	.52	.45	3500
MGA- **26**	.047	.56	.51	3500
MGA- **31**	.047	.59	.56	3500
MGA- **41**	.047	.67	.67	3000
MGA- **51**	.063	.77	.94	2500
MGA- **76**	.063	.89	1.19	2500
MGA-**101**	.063	1.00	1.42	2500
MGA-**152**	.063	1.19	1.86	1600
MGA-**202**	.094	1.41	2.93	1500

Type NUA Cable
For Inside Construction

SHEATH.—Pure lead.

CONDUCTORS.—No. 22 'A. W. G. tinned, enamel double cotton lacquered insulation, colored in accordance with standard color scheme so that each pair is distinguishable from other pairs in the cable.

CONDUCTOR RESISTANCE.—Not exceeding 105 ohms per mile of cable, at 68 degrees Fahrenheit.

INSULATION RESISTANCE.—Not less than 500 megohm miles.

DIELECTRIC STRENGTH.—Insulation of each conductor capable of withstanding an a.c test potential whose maximum instantaneous value is 700 volts.

Code No. and Guaranteed No. of Pairs	Thickness Sheath Inches	Mean Outside Diameter Inches	Approx. Weight Pounds per Foot	Convenient No. of Feet on Reels
NUA- **6**	.047	.34	.25	3500
NUA-**11**	.047	.41	.32	1000
NUA-**16**	.047	.47	.39	1000
NUA-**21**	.047	.52	.45	1000
NUA-**26**	.047	.56	.51	1000
NUA-**31**	.047	.59	.56	1000
NUA-**41**	.047	.67	.67	3000
NUA-**51**	.063	.77	.94	2500

Western Electric No. 224-C Vacuum Tubes

Cathode Ray Oscillograph Tube

The Western Electric No. 224-C Vacuum Tube is a Cathode Ray Oscillograph Tube which may be used to obtain the performance characteristics of nearly every kind of electrical apparatus. It particularly fills the need for an oscillograph operating at frequencies up to a million or more cycles per second.

The spot of light produced by the cathode ray on a fluorescent screen within the tube may be moved simultaneously in 2 directions by varying voltages applied to 2 pairs of internal deflector plates, or by current passing through external coils, the resulting trace giving the relation between the 2 currents or voltages. A deflection of one inch is produced by 25 volts on a pair of deflector plates or by 25-ampere turns in suitable coils.

The power equipment required for the tube is a 300-volt B battery and a 6-volt storage battery.

Western Electric Type 20 Thermocouples

Type 20 Western Electric Thermocouples are for high frequency current measurements. Used in conjunction with an ungrounded, wooden-cased galvanometer or microammeter, they measure alternating currents of frequency well over 1,000,000 cycles with the same accuracy as obtained with d.c. instruments.

High grade materials, electrical spot-welding of parts and enclosure in a glass envelope evacuated to the same degree as high grade thermionic tubes, insure constancy of calibration.

Matching of couple elements for maximum sensitivity makes possible operation up to 15 millivolts output, with moderate power input in the heater. The almost linear characteristic in the 5–15 millivolt range increases accuracy of reading. This also permits use of more rugged galvanometers for measuring d.c. output.

Type 20 Thermocouples are convenient, precise, and dependable. They are mounted in hardwood containers with sturdy positive contact binding posts and identification plates.

Type	Maximum Heater Resistance Ohms	Couple Resistance Ohms	Nominal Current at 5 Millivolts Ma.	Nominal Current at 15 Millivolts Ma.
20A	.35	3	450	850
20B	.65	3	200	400
20AA	2.0	3	70	140
20AB	6.0	3	35	70
20AC	15.0	12	14	28
20AD	40.0	12	5.6	11.2
20AE	300.0	12	2.8	5.6
20AF	1200.0	12	1.2	2.6

Western Electric Audiphones

Western Electric Audiphones reflect the skill and experience of their designers, Bell Telephone Laboratories and their makers, Western Electric Company—both leaders in the sound transmission field.

No. 36-A

The No. 36-A audiphone, illustrated at the left, consists of a microphone, a receiver, a rheostat, connecting cords and battery plug. It is suitable for those with a moderate degree of hearing impairment.

No. 36-A.....each **$50.00**

No. 37-A

This audiphone differs from the No. 36-A in that an amplifier is added. This gives a wider hearing range and is suitable for those whose hearing impairment is of an extreme character. It is designed for those who wish to carry the transmitter and amplifier in separate pockets.

No. 37-A.....each **$95.00**

No. 38-A

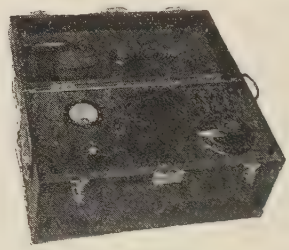
Similar to the No. 37-A, the No. 38-A is also equipped with an amplifier and is also suitable for those having a considerable hearing impairment. This audiphone has the microphone, rheostat and amplifier assembled in a neat, metal box. It is offered for those who prefer to carry this box rather than having the transmitter and amplifier in their pockets.

No. 38-A.....each **$95.00**

Audiphone Accessories

Two types of ear pieces are available, a stock earpiece furnished with each audiphone or if preferred an individually moulded earpiece (not included in price). The No. 12-A carrying case is available for use with the No. 38-A audiphone. The No. 11-C battery box is a convenient means of carrying the batteries needed with all three models. Special batteries for audiphone use are available.

Western Electric Audiometers



No. 2-A

Offers physicians an accurate, dependable method of testing the acuity and quality of their patients' hearing. Office assistants can easily and accurately chart each patient's hearing and file charts for comparative records.

No. 2-A.....each **$550.00**

No. 3-A

Developed for use in industrial health work. By use of this instrument hearing tests are made speedily and accurately.

No. 3-A.....each **$400.00**

No. 4-A

Designed for school use; enables the school physician or teacher to periodically check an entire classroom at one time. As many as 500 children can be checked within one school day.

No. 4-A.....each **$518.50**

No. 5-A

Successfully used in schools, industrial offices, automobile license examination rooms and by railroads.

No. 5-A.....each **$235.00**

Full information on these audiometers on request.

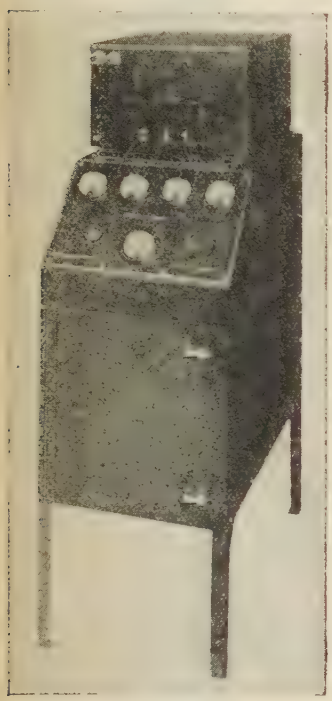
Western Electric

Commercial and Police Radio Broadcasting Equipment

Broadcasting today has become a vital and recognized factor in the entertainment and education of the American public. The broadcasting business has achieved this recognition by successfully assuming their two outstanding obligations to listeners in (1) Constantly improving the quality and variety of programs and (2) Improving the quality and performance of their equipment.

Station popularity comes as a direct result of sending out clear, undistorted programs of merit with the least possible number of interruptions and at a satisfactory volume. Western Electric offers broadcasting executives a complete service to help them improve the quality, volume and continuity of their broadcasting. Bell Telephone Laboratories, leaders in sound research, are continually studying, checking, testing and developing new equipment and improvements on equipment already introduced. Western Electric adds precision manufacturing, using the choicest of materials in producing the highest quality apparatus. Graybar Electric offers these soundly developed, well manufactured devices to you through its conveniently located offices in 73 principal cities throughout the United States.

50-Watt Police Transmitters

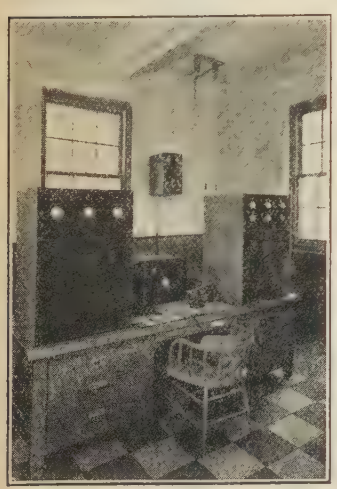


This new police transmitter offers the latest and best equipment for modern police work.

Police requirements in some sections showed the need for a 50-watt transmitter and it has been carefully designed to meet every police need.

Clear, dependable voice transmission is a feature of all Western Electric Police Radio Transmitters.

400-Watt Police Transmitters



More than 40 cities in every part of U.S.A. are using Western Electric Police Radio to combat crime in their police work. The success of police radio is no longer questioned—police officials everywhere recognize its importance in their work.

Western Electric Police Radio Transmitters have improved facilities for maintaining frequency stability. Speech is transmitted with great precision. Its superiority of mechanical and electrical construction assures dependable operation. The equipment is compactly assembled and operating costs are low. The equipment was designed and manufactured to meet the needs of police radio work.

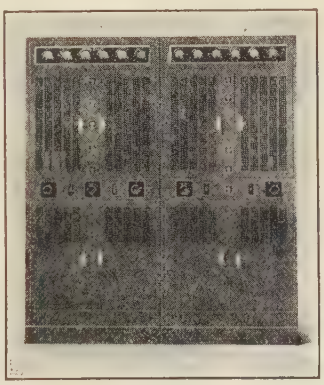
Police Radio

In considering the problem of police radio, dependability in operation and clear transmission are often a matter of life and death. In the development of police radio equipment, Bell Laboratories and Western Electric have spared no expense to secure the utmost in quality and dependability.

100, 500 and 1000-Watt Commercial Broadcasting Transmitters

Western Electric offers commercial broadcasters a complete line of transmitting and speech input equipment from 100 watts to 500000 watts.

The 304-A Western Electric Transmitter has a power of 1000 watts secured by increasing the power of the 12-A transmitter (100 watts) by use of the 71-A amplifier. This unit can also be adapted to give a power output of from 100 watts to 1000 watts.



This equipment is a.c. operated, compact and offers the advantages of radiation cooled tubes, the latest in circuit arrangements, harmonic suppression, automatic control circuits and quality construction. It offers the small station owner the opportunity of easily and quickly increasing his power output along the most improved and up-to-date lines.

5000, 50,000 and 500,000-Watt Transmitters

The 5000, 50000 and 500000-watt transmitters offer station owners the very latest developments in the art of radio transmission. Dependability, quality of transmission, compactness and ease of operation were all considered carefully in the development and manufacture of these transmitters. Details regarding this equipment will be gladly furnished.

Speech Input Equipment

Western Electric 9-A Speech Input Equipment offers flexibility of equipment in handling studio as well as remote pick-up points. Microphone switching, together with mixing apparatus and monitor speakers, are all provided with this equipment. Other advantages are a.c. operation, moving coil microphones, improved volume indicator, single panel mounting, factory wiring and master gain control.

Police Radio Receivers

Graybar offers police departments a superior receiving set manufactured by the Stromberg-Carlson Company. This set was particularly designed to meet the special requirements of police work and represents the result of our experience with police radio installations in New York, Chicago, Detroit, Rochester and Atlanta.

Western Electric

Public Address, Music Reproducer, and Radio Distribution Systems

Wherever large groups of people gather, indoors or out, there is a need for Public Address Equipment. Speech or music may be reinforced and, with excellent quality, reproduced so that everyone will hear perfectly.

Public Address Equipment is used for entertainment and education, at public meetings, for re-broadcasting radio programs, amplifying record music for dancing, or music appreciation study, making announcements, amplifying speakers' voices, advertising purposes, descriptions of races, baseball and football games, paging, and a dozen and one other sound transmission purposes.

Bell Telephone Laboratories, recognized leaders in the development of sound transmission, are responsible for the design of all Western Electric Public Address Equipment. To sound design, Western Electric adds all the advantages to be derived from their well-known high standards of manufacturing. This material is made available to users everywhere in U. S. A. through Graybar's 73 conveniently located offices. More than 1300 installations of Western Electric Public Address Equipment have given us an experience in this field of great value to prospective users.

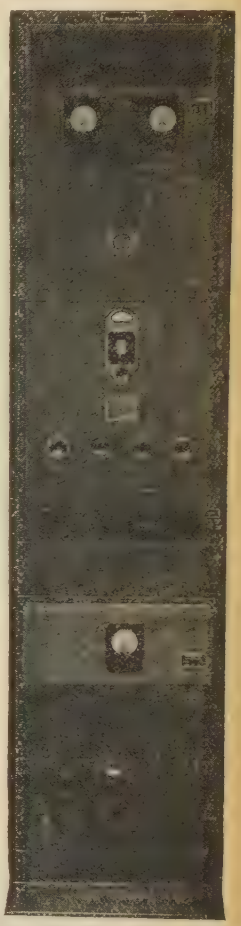
No. 204-A Music Reproducer

Hotels, Restaurants, and Clubs

The New Waldorf-Astoria illustrates the many uses for Western Electric Public Address Equipment and this installation is an indication that our equipment is accepted by the leaders.

Paging, voice amplification, transmitting programs of dance music (either records or hotel orchestra) wherever desired, rebroadcasting selected radio programs—any or all these things can be done through using our equipment.

Quality of reproduction is assured if Western Electric Equipment is used.



Amplifier Panel Assembly with Radio Receiver

No. 618-A-13 Microphone

Schools and Colleges

Western Electric Equipment was selected for such modern schools as the Brooklyn Technical High School (Brooklyn, N. Y.) and the University of Texas.

Educators have found Public Address Equipment useful for many classroom, auditorium, gymnasium, and athletic field activities.

Our booklet "Greater Educational Facilities" will prove interesting to anyone in the field of education.

Churches and Auditoriums

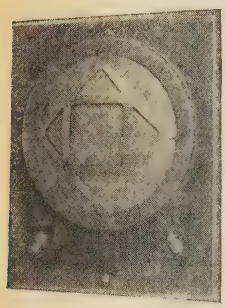
For clear, undistorted voice amplification choose Western Electric Equipment—this has been the decision of many churches and auditorium managers.

To mention two leaders—the Atlantic City Auditorium (Atlantic City, N. J.) and St. Justian's Church (Hartford, Conn.).

Outdoor Installations

For outdoor installation of all types—amusement parks, football fields, baseball parks, race tracks, and others, Western Electric Equipment has proven thoroughly satisfactory.

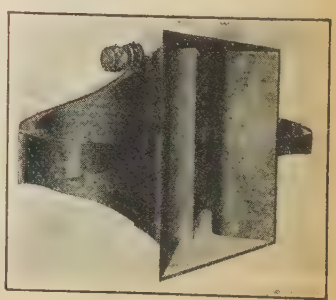
A few of the largest installations are Playland Park (Rye, N. Y.), Rose Bowl (Pasadena, Cal.), Athletics Ball Park (Philadelphia, Pa.), and several well-known tracks and other types of outdoor installations.



No. 575-A Loud Speaker

Special Wire and Cords

Special wire and cords for Public Address and Speech Input Wiring can be furnished by Graybar. These wires and cords have been specially designed and manufactured for this type of installation work and full information and prices are available to any one from Graybar's 73 distributing houses or direct from executive headquarters at 420 Lexington Avenue, New York City.



No. 6116-A Loud Speaker

RADIO

The Graybar Electric Company offers its dealers a line of radio sets manufactured by the Colonial Radio Corporation of Buffalo, N. Y.

COLONIAL RADIO.—Always abreast of the time in circuit, style and construction and meeting the most exacting of performance requirements, embodies dealer and buyer advantages which make it one of the most outstanding lines on the market.

Every set produced at the huge plant in Buffalo, N. Y., must measure up to these Graybar-Colonial standards before it is offered to the trade. From the standpoint of engineering, it must be equal to or better than any other set in its class. From the standpoint of value, it must have the construction features and the style and deliver performance equal to or better than any other set at the price. From the standpoint of merchandising, it must have the popular appeal which makes it a live, moving number in the dealer's store.

This is why an ever increasing number of retailers regard Colonial Radio as one of their dependable, year-in and year-out sources of profit. It is made right, priced right and promoted right for successful radio retailing. It is endorsed by Graybar as being in every way worthy of the dealer's and the buyer's confidence.

All of the new and proved radio developments are present in the current line. Literature describing the new models and the complete advertising and merchandising service available to the trade may be obtained from any of the branches of the Graybar Electric Company.

JUDGE IT BY THESE

"10 Features"

Get the facts. Compare Colonial Radio point by point with these 10 features as your guide:

1. ENGINEERING
2. CONSTRUCTION
3. PARTS
4. POWER
5. SELECTIVITY
6. TONE
7. OPERATION
8. DEPENDABILITY
9. SERVICE
10. GUARANTEE

COLONIAL Radio

Distributed by GraybaR

Licensed by Radio Corporation of America and Associated Companies.

RCA Radiotrons

Type	Each	†Cathode	Volts
RCA-1A6	$1.75	Filament	2
RCA-2A3	2.25	Filament	2.5
RCA-2A5	1.60	Heater	2.5
RCA-2A6	1.60	Heater	2.5
RCA-2A7	2.20	Heater	2.5
RCA-2B7	2.00	Heater	2.5
RCA-5Z3	1.50	Filament	5.0
RCA-6A4	1.60	Filament	6.3
RCA-6A7	2.20	Heater	6.3
RCA-6B7	2.00	Heater	6.3
RCA-6C6	1.25	Heater	6.3
RCA-6D6	1.25	Filament	2.0
RCA-6F7	1.80	Heater	6.3
RCA-12Z3	1.20	Heater	6.3
RCA-25Z5	2.00	Heater	25.0
RCA-01-A	.60	D. C. Filament	5.0
RCA-1	1.50	Heater	6.3
RCA-1-V	1.25	Heater	6.3
RCA-10	5.00	Filament	7.5
UX-112-A	1.30	D. C. Filament	5.0
RCA-19	1.50	D. C. Filament	2.0
RCA-22	2.00	D. C. Filament	3.3
RCA-24-A	1.20	Heater	2.5
RCA-26	.65	Filament	1.5
RCA-27	.70	Heater	2.5
RCA-30	1.30	D. C. Filament	2.0
RCA-31	1.30	D. C. Filament	2.0
RCA-32	1.90	D. C. Filament	2.0
RCA-33	2.10	D. C. Filament	2.0
RCA-34	2.15	D. C. Filament	2.0
RCA-35	1.30	Heater	2.5
RCA-36	1.50	Heater	6.3
RCA-37	1.20	Heater	6.3
RCA-38	1.45	Heater	6.3
RCA-39-44	1.50	Heater	6.3
RCA-41	1.60	Heater	6.3
RCA-42	1.60	Heater	6.3
RCA-43	2.50	Heater	25.0
RCA-44-39	1.50	Heater	6.3
RCA-45	.75	Filament	2.5
RCA-46	1.55	Filament	2.5

Type	Each	†Cathode	Volts
RCA-47	$1.30	Filament	2.5
RCA-48	3.00	D. C. Heater	30.0
RCA-49	1.70	D. C. Filament	2.0
UX-50	4.00	Filament	7.5
RCA-53	1.80	Heater	2.5
RCA-55	1.60	Heater	2.5
RCA-56	1.20	Heater	2.5
RCA-57	1.65	Heater	2.5
RCA-58	1.65	Heater	2.5
RCA-59	2.00	Heater	2.5
RCA-71-A	.75	Filament	5.0
RCA-75	1.60	Heater	6.3
RCA-77	1.80	Heater	6.3
RCA-78	1.80	Heater	6.3
RCA-79	2.60	Heater	6.3
RCA-80	.70	Filament	5.0
UX-81	3.50	Filament	7.5
RCA-82	1.20	Filament	2.5
RCA-83	1.55	Filament	5.0
RCA-84	1.75	Heater	6.3
RCA-85	1.60	Heater	6.3
RCA-89	1.80	Heater	6.3
UX-199	1.50	D. C. Filament	3.3
*UX-200-A	4.00	D. C. Filament	5.0
*WD-11	3.00	D. C. Filament	1.1
*WX-12	3.00	D. C. Filament	1.1
*UX-120	3.00	D. C. Filament	3.3
*UV-199	2.25	D. C. Filament	3.3
*UX-240	2.00	D. C. Filament	5.0
*UX-874	4.90	.....	....
*UV-876	6.70	.....	....
*UV-886	6.75	.....	....
UX-841	10.40	Filament	7.5
UX-842	10.40	Filament	7.5
RCA-868	7.50	.....	....
RCA-864	2.10	D. C. Filament	1.1
RCA-852	28.00	Filament	10.0
RCA-865	15.00	Filament	7.5
RCA-866	6.75	Filament	2.5
.....	....	.....	....

*No replacements are made on these types.
†Either a.c. or d.c. may be used on the filament or heater, except as noted.

Prices

The prices given on appliance and radio items listed on pages 676 to 706 inclusive are, in general, eastern prices. Prices on the Pacific Coast are slightly higher. This does not apply to Radiotrons. These prices are subject to change without notice and are not to be considered as quotations.

Graybar Clothes Washers

With and Without Pump

Four-bladed aluminum Agitators. Smooth finished with rounded corners. Top bearings of agitator shafts above water line.

Tanks are one piece armco iron vitreous porcelain enameled. Ventilated covers.

Pumps of two-bladed centrifugal type, gear driven. Cleaned by removing face plate, lubricated by a grease cup.

Motors are furnished for any frequency or voltage. Insulated from frame. Operate both agitator and wringer or spinner basket at the same time. Waste packed bearings.

Mechanism fully enclosed. Operates in a special lubricant.

The floor space is 25x25 inches.

Cord, 10 ft. rubber covered with rubber attachment plug.

Two-Speed Washers

No. 18 Without Pump, No. 18P With Pump

Capacity, 8 lbs. Dry Clothes, 12 gals. water

TWO-SPEED AGITATOR. — At Fast Speed the agitator oscillates approx. half a revolution at a speed of approx. 60 cycles per minute. At Slow Speed it oscillates a third of a revolution. Action controlled by positive clutches operated by single selective control lever.

CHASSIS.—Shallow cylindrical steel shell with superstructure of steel, mounted on three braced pressed steel legs. Cadmium-plated casters.

TANK.—Supported and clamped between rubber mountings in chassis. Green outside, white inside. Rubber rimmed. Cover polished sheet aluminum. Tank 14¼ in. deep, 22 in. diam.

MECHANISM.—Belt drive for the first reduction and worm gearing for second reduction. An oil pump within gear mechanism lubricates moving parts.

PUMP.—Operated by a lever on outside of machine. Tank is also self draining, no shut-off valve. Nickel plated removable strainer.

MOTOR.—Approximate rating 300 watts, ¼ h.p. Movable for adjustment of belt tension.

Shipping weight, No. 18, 245 lbs., No. 18P, 250 lbs.

Two-Capacity Washers

No. 19 Without Pump, No. 19P With Pump

Capacity, Full Load, 8 lbs. Dry Clothes, 12 gals. Water
Small Load, Between 2½ or 3 lbs. 6-7 Gallons of Water

Two finishes—speckled green, black and white.

TWO-CAPACITY AGITATOR. —Reversible. Agitator disc at bottom of tank, upright for Full Load and Reversed for Small Load. Oscillates approx. half a revolution at speed of approx. 57 cycles per min. Action controlled by positive clutch operated by lever.

CHASSIS. — Pressed steel base mounted on four braced pressed steel legs. Cadmium-plated casters.

TANK.—Vertically corrugated. Cover, terneplate lacquered on outside surface. Tank is 13 in. deep, 22 in. diameter.

MECHANISM.—Single worm gear reduction. Moving parts lubricated by splash system.

PUMP. — Operates when motor is running. Cast brass shut-off valve controls draining.

MOTOR.—Approximate rating 300 watts, ¼ h.p. Shipping weight for No. 19, 182 lbs., No. 19P, 188 lbs.

Simplified Washers

No. 15 Without Pump, No. 25 With Pump

Capacity, 6 lbs. Dry Clothes, 10 gals. Water

Centrifugal types, spinner basket in place of wringer. Special feature, basket, mounted on a separate shaft is in same tank with agitator, thus conserving floor space. Both operate simultaneously and are controlled by one switch. The second batch of clothes washes while the first batch dries, a convenience and time saver.

AGITATOR.—Is mounted on a splined agitator shaft within the center column and so designed that it cannot fit over the spinner shaft. Agitator oscillates between 140° and 150° at a speed of approx. 72 cycles per min.

SPINNER BASKET.—One piece drawn sheet aluminum with separate breast ring double-locked seamed. Embossed base and perforated side. Exceptionally smooth inside and outside. Speed approximately 430 r.p.m.

FRAME.—Consists of three pressed steel legs joined together by a steel brace. There is a reinforcing brace for extra strength. Casters, rubber tired, self lubricating. Caster cups available if desired.

TANK.—Bolted to legs. Rubber rimmed. Cover, polished aluminum. Tank is 16 in. deep and 22 in. diameter.

MECHANISM.—A belt drive for the first reduction and a spur gear train for the second reduction. Moving part lubricated by splash system.

PUMP.—Operates whenever motor is running. Cast brass shut-off valve controls draining. Nickel plated brass strainer, easily removable.

MOTOR.—Vertical ⅙ h.p. approximate rating, 230 watts. Easy adjustment of belt tension is provided. Rubber bumpers clipped to leg brace absorb motor vibration.

Shipping weight, No. 15, 125 lbs., No. 25, 143 lbs.

Wringers

Nos. 18, 18P, 19, 19P

Pressed steel cadmium plated wire brushed.

Reversible swinging types with soft rubber balloon rolls, 2¼ in. diameter, 12 in. long, clothes guides and tilting drain flume. Top section is separable.

Wringers swing and lock into any one of several operating positions. Simplified tension release, no gears, no oiling.

Wringers can be operated while agitators are running.

All the green finish models are equipped with wringer as illustrated, which has the release tension lever on top of wringer.

No. 19 black and white washers can be equipped with wringer having the new bar tension release located on both sides of wringer.

Prices upon Application

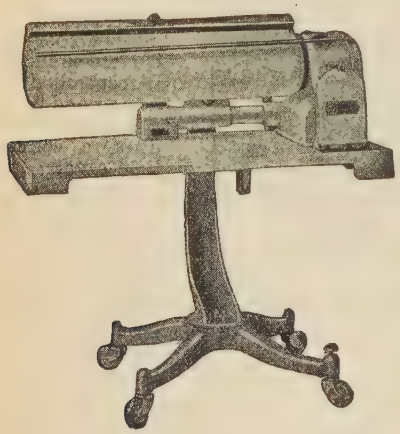
Apex Electric Ironers

Ironer has both ends unobstructed. Full open left end permits slipping of circular garments over roll.

With rubber-mounted, noiseless, horizontal motor fully insulated and enclosed in gear case. Knee control is rubber padded. Hand control is located on top of gear case. Intensified heat at full open end where major portion of ironing is done. Convenient control switches for motor and heating shoe. Has duo switch with bakelite housing and face plate.

Pilot light with Beetleware shield indicates current supply to heating element. With pressing lever to convert revolving roll to stationary pressing position for pleating or pressing. Shoe release lever permits open movement of shoe for cleaning or waxing; also an emergency release. Plated clothes rack swings to right of operator. Has rubber casters; two lock casters prevent movement while ironer is in use.

Model LF-3 Folding Ironer



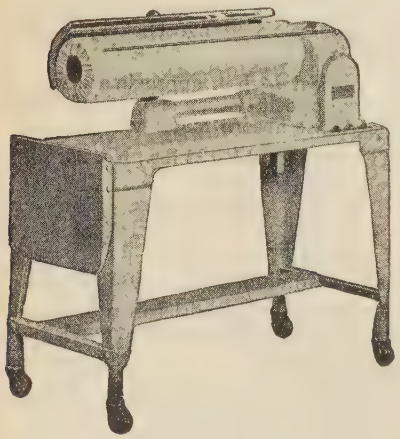
When ironer is closed it occupies no more space than a kitchen chair. Easy to fold or unfold.

Dimensions when open: Width, 36 inches; depth, 20 inches; height, 36 inches. Dimensions when closed: Width, 20 inches; depth, 20 inches; height, 47 inches.

Shipping weight, 176 pounds.

Model LF-3.....each **$89.50**

Model LL-3—Stand Type Ironer



Has 4 steel legs which support frame and are anchored with cross frame brace. At left or full open end a folding tray of 161 square inches of area is provided to rest large pieces while ironing.

Width, 36 inches; depth, 16 inches; height, 36 inches.

Shipping weight, 150 pounds.

Model LL-3.....each **$79.50**

Shoe is of polished chrome-plated steel. The 1200-watt capacity heating element is compressed between two plates of mica insulation and is secured to back of shoe by heavy steel binder plate over strip of asbestos.

A strong, well ribbed steel stamping with a formed skirt provides the main frame.

Roll construction: 20 gauge rolled steel 5 inches i.d.; 6 inches o.d.; reinforced at left or free end with recessed steel stamping to receive roll drive and a steel stamped ring at right to accommodate roll bearing—provides non-sagging base on which is wound a knitted cotton padding protected with removable muslin cover. Roll swings up and into shoe when in ironing position, affording an overall pressure in excess of 150 pounds. Clearance between roll and receiving pan, 4½ inches. Roll revolves at the speed of 11 feet per minute.

Model LC-3 Deluxe Console Ironer

Combines all the advantages of beauty and utility. Porcelain table top finished in white vitreous enamel, edged with ivory to harmonize with white sides of cover and ivory legs.

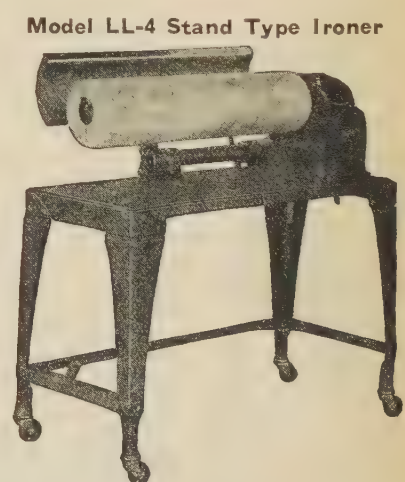
Cabinet is scientifically balanced—a touch swings it over and down to an out of the way position at the rear, exposing the ironer for instant operation.

Length, 36 inches; width, 19½ inches. Height: To top of shoe, 35½ inches; to top of cabinet closed, 36 inches. Width folded, 28 inches; height folded, 35½ inches. Space required when closed, 36x19½ inches.

Shipping weight, 188 pounds.

Model LC-3.....each **$99.50**

Model LL-4 Stand Type Ironer



This ironer has 4 steel legs which support the frame and are anchored by cross frame brace.

Similar to Model LL-3 ironer but without folding tray.

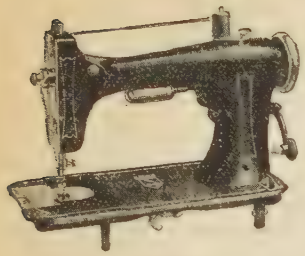
Width, 35 inches; depth, 16 inches; height, 36 inches.

Shipping weight, 140 pounds.

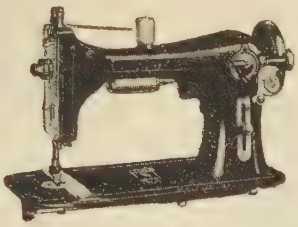
Model LL-4.....each **$59.50**

Graybar Sewing Machines

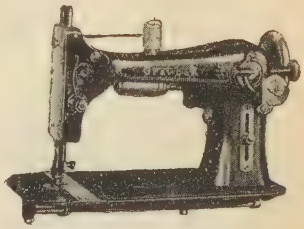
Standard Heads for Models 1731, 1728 and 1409
With Knee Control



No. 2, Rotary
Automatic Tension



No. 9, Shuttle
Automatic Tension



Vindex C, Shuttle
Side Tension, Disc Type

The three styles of standard heads, illustrated above, are full size lock-stitch types with chromium-plated bright parts, long slender lines giving streamline contour.

Equipped with built-in motor and built-in sewing light under arm, eliminating glare and shadows; small solid disc hand wheel, stitch regulator and bobbin winder.

Cabinet Designs

Model 1731

Size, closed, 17¾x23 inches Height, 30 inches.

Walnut and gum richly finished. An attractive overlay of beautiful burl walnut is on front of door. Turned legs, gum finished to match cabinet. A cross stretcher makes them decidedly rigid and strong.

Equipped with any one of the three standard heads illustrated above.

Shipping weight, 87 pounds.

Model 1728

Size, closed, 17¾x21 inches. Height, 30 inches.

Walnut and gum richly finished. Lid top and door front of matched burl walnut. The legs, constructed of gum finished to match cabinet, are strong and rigid. Striped walnut overlays ornament panels at top of legs.

Equipped with any one of the three standard heads illustrated above.

Shipping weight, 80 pounds.

Model 1409

Size, closed, 16½x20 inches. Height, 30 inches.

Walnut and gum richly finished. Door is relieved by overlays of walnut with a pendant near the top. Figured pilasters and beaded molding add further decoration. Turned legs, gum finished to match cabinet. Pocket for attachments in cabinet.

Equipped with any one of the three standard heads illustrated above.

Shipping weight, 87 pounds.

Model 7000

Moderne in design, made of selected woods particularly adaptable for this style. The body is of genuine oriental wood similar in texture to our American walnut but with a finely figured mottle like burl.

Base and central feather on door, the edges of tops and overlays and the pilaster mountings are ebonized walnut.

The relief feather, frieze and pilasters on door are birdseye maple finished in rich tan pastel. The inlay trim is polished chromium.

When open, there is ample knee room. A deep pocket and shelf provide space for attachments and accessories.

This model comes only with the No. 2 Rotary Head and is equipped with knee control.

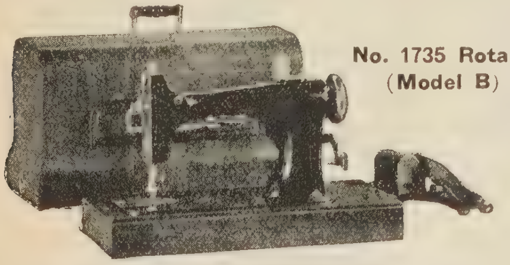
Size, closed, 16½x20 inches. Height, 29½ inches.

Shipping weight, 108 pounds.

A Full Set of Attachments Comes with Every Machine
Prices on Application

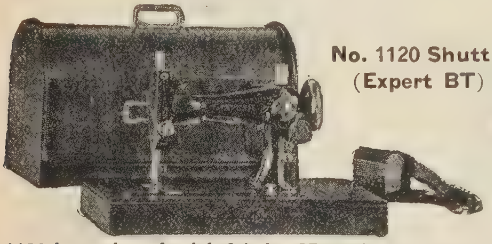
Graybar Sewing Machines
With Foot Control
Portables Nos. 1735 and 1120

These models are designed with a view to convenience and compactness. When not in use they can be put away in the closet. Convenient to carry; set on any table; connect to any outlet. Constructed of genuine American walnut, and equipped with a convenient handle and locking device. There is a compartment in the base for attachments.



No. 1735 Rotary (Model B)

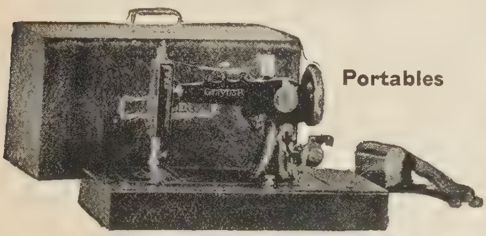
No. 1735 is equipped with the full-size standard No. 2 rotary head; lock stitch, built-in motor, automatic tension, sewing light, chrome-plated bright parts.
Shipping weight, 65 pounds.



No. 1120 Shuttle (Expert BT)

No. 1120 is equipped with ¾ size No. 1 head; long shuttle type, lock stitch, motor recessed in arm of machine, sewing light, light weight, chrome-plated bright parts.
Shipping weight, 60 pounds.

Paveway Regal Models



Portables

Low-priced shuttle types, ¾ size head, lock stitch. Motor built close to arm to allow use of small solid disc hand wheel, a feature of the higher priced machines. Spring tension on top of arm. Chromium-plated bright parts. Walnut veneer base with drawer for accessories.

No. **6002**—Walnut cover with handle and locking device. Shipping weight, 60 pounds.

No. **1090C**—Rubberized cover instead of wooden. Lighter in weight. Shipping weight, 45 pounds.

Cabinet No. 1408

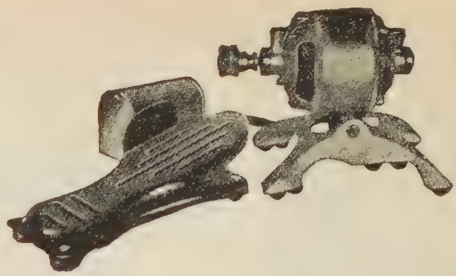
Size, closed 16¼x20 inches. Height, 30 inches.

Walnut and gum richly finished. Equipped with the same sewing head as the Paveway Regal Portable. Foot control.

Shipping weight, 82 pounds.

A Full Set of Attachments Comes with Every Machine
Prices on Application

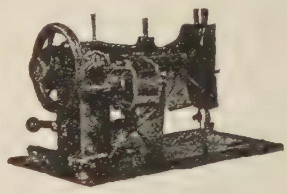
Hamilton Beach Home Motors



This motor can be attached to any sewing machine, old or new. Set the pulley of the motor underneath the handwheel of the machine and slight pressure of the foot on the speed control starts the motor.

Price, Motor with Speed Control, Cord and Plug. . ea. **$12.50**
Price, Fan Attachment........................each **3.00**
Price, Grinder and Polisher Attachment.......each **1.50**

Hamilton Beach Fit-All Sew E-Z Motors



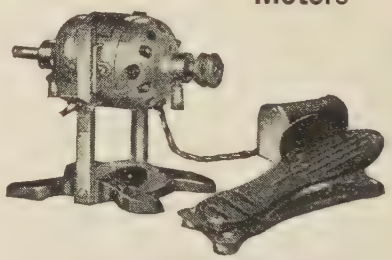
This bracket is readily adjustable to any make or model sewing machine. Attaches in belt holes very ingeniously and is permanent.

Swings under head. Sews fast or slow or speeds between. Controlled by a slight pressure on the speed pedal. Operates on both A.C. or D.C., 105 to 115 volts, 25 to 60 cycles.

Furnished with speed pedal, cord and plug.

Hamilton Beach Fit-All Sew E-Z Motors......each **$19.25**

Hamilton Beach Tailor Type Sewing Motors



The tailor type motor fits and operates practically all types and models of light tailor machines.

Size of Motor.—Diam., 3⅛ inches; length, 5½ inches, length of shaft, 7 5/32 inches. Size of pulley, 1-6 inches. Weight, 4¾ pounds.

Motor wound for 115 volts, a.c. or d.c., 25 to 60 cycles. Watts, 41 to 70.

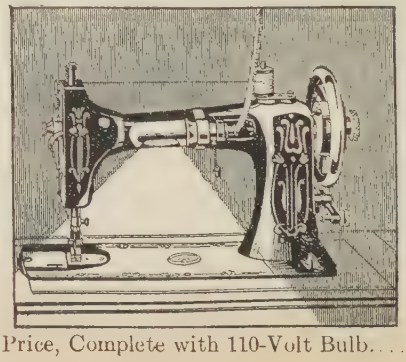
Shaft extension outside of motor is equipped with friction attachment for winding bobbins.

Furnished with speed control, cord and plug.

Tailor Type Motor..........................each **$28.50**

National Detachable Sewing Lamps

This lamp is so constructed that there is no glare to hinder the operator of the machine. There is a brilliant light on the needle and the work. Lamp fits all makes of treadle and electric sewing machines.



End of reflector is covered. A pull chain is provided.

Heavily nickel-plated finish.

With 6-foot cord and plug to fit any standard socket and wall outlet and Mazda lamp bulb.

Special voltage bulbs are extra.

Price, Complete with 110-Volt Bulb............each **$3.95**

Graybar Vacuum Cleaners

No. 40 Two Speed with Motor Driven Brush

The outstanding feature of this motor-driven brush cleaner is its two speed motor, which gives a Normal Speed and an Extra Speed. The Normal Speed gives a powerful suction that does a thorough cleaning job on any type rug. But if a still more powerful suction is wanted, a flip of a switch located underneath motor shell, will give a much greater speed.

This Extra Speed is particularly advantageous for quick cleaning or when an unusually difficult cleaning job is to be done.

The motor is rated at 300 watts, 1/5 h.p., approximately 10,000 r.p.m. It is of unit construction and may easily be removed from the case. The motor is mounted on rubber supports which prevent excessive noise and vibration.

Overall dimensions, 14 inches wide by 13½ inches long. Height at highest point, 8 inches. Weight 16 pounds.

No. **40**. . . . . .each **$47.50**

Specifications No. 40 and No. 46

Ball-Bearing Motor.—Horizontal, universal type. Kept cool by means of an independent cooling fan. Bearings packed in grease and require no oiling. Large sized motor brushes. Especially designed suction fan with seven steel blades.

Body and Nozzle.—Aluminum castings. Polished all over. Supported on three wheels. Rear wheel swivelled on end of motor housing. Nozzle edge protected by rubber bumper. No. 40 has moulded rubber wheels. Front wheels fitted with large cadmium plated hub caps and adjustable to regulate nozzle height. No. 46 has rear wheel adjustable to regulate nozzle height.

Size of Nozzle.—No. 40 is 13 inches long and 1 7/16 inches wide. No. 46 is 13 inches long and 1 3/8 inches wide.

Handle and Handle bale.—Steel, chromium plated. Cord hooks, heavy gauge aluminum. Trigger-type switch. Handle is spring balanced and detachable at top of handle bale. Insulated by fibre sleeve. No. 40 has an adjustable tilting catch and composition handle grip, corrugated on the underside. No. 46 has a black enameled wooden handle grip.

Motor Driven Brush.—Metal spindle with chinese bristles set in tufts in spiral formation. Ball-bearings. Belt reduction from motor. Endless belt of flat rubber, extra belt comes with each machine. Brush held firmly in spring sockets. No. 40 has a special brush adjustment, provides for three adjustments.

Bag of dark blue. Hooks on handle. Breach type connection to fan outlet. No. 40 has a clip type emptying clamp, chromium plated steel. No. 46 has bag clip of aluminum, black enameled.

Wiring.—Motor cord detachable at base of handle. No. 40 has a rubber covered conductor cord fitted with rubber attachment plug. Cord is 20 feet long. No. 46 has a black fabric covered conductor cord with attachment plug. The cord is 18½ feet long.

No. 46 Motor Driven Brush

With Exceptionally Strong Suction

Designed and manufactured to sell at an extremely low price that will be attractive to the consumer, yet it embodies the Graybar quality in construction and efficiency.

The motor is rated at 310 watts, 1/5 h.p., approximately 10,500 r.p.m.

Overall dimensions, 13¾ inches wide and 12 inches long.

Height at highest point 7¼ inches.

Weight 13 pounds.

No. **46**. . . . . .each **$27.50**

Graybar Hand Cleaners

The hand cleaner takes the place of vacuum cleaner attachments.

It cleans just as effectively and much more convenient to use.

No. 44 Handy Cleanerette

Equipped with built-to-the-hand handle, modeled after hand set telephones; flat on the bottom and rounded on top; black moulded composition. Rubber bumper. The cleanerette has a rubber covered cord 15 feet long. Cord has moulded rubber attachment plug. Overall dimensions, 11½ inches long without the bag, 19¾ inches long with the bag. Nozzle opening is 5/16 inches long and 5/8 inches wide. Weight 4 pounds. Wattage 175.

No. 1 Accessory Equipment available for No. 44 cleaner consists of a combination blower and suction tool, a glass container, a rubber clamping device, an aluminum adapter with screen and a sample can of dichloricide.

Separately priced at $1.75.

No. **44**, without No. 1 Accessory Equipment. . . .each **$16.00**
No. **44**, with No. 1 Accessory Equipment. . . . . . .each **17.00**

No. 50 Hand Cleaner

Hand cleaner is equipped with a black moulded composition handle and fabric covered cord 15 feet long. Cord has an attachment plug. Overall dimensions, 9¾ inches long without the bag, 16¾ inches long with the bag. Nozzle opening, 4⅞ inches long and 5/8 inches wide. Weight 3 pounds. Wattage 120.

No. **50**. . . . . .each **$10.95**

Specifications No. 44 and No. 50

Finish.—Die cast aluminum nozzle and fan housing, drawn aluminum motor case.

Bag.—Dark blue, self-supporting with spring wire loop inside. Breach type connection to fan outlet. No. 44 has aluminum bag clip. No. 50 has aluminum bag clip, black enameled.

Motor.—Universal type, ball bearing needing no oiling. Seven-bladed suction, independent cooling fan which discharges air through slits in motor case.

Brush.—A small bristle brush permanently attached to the rear edge of nozzle.

Control.—Tumbler switch located on top and at rear of motor housing, adjacent to handle.

Graybar Quiet Type Fans

The Quiet-Type Fans move large volumes of air with exceptional quietness. This is made possible by the entirely new design of blades. These are so shaped and pitched that they handle the air extremely quietly, yet provide a volume of air and at a velocity found only in much larger Standard Fans. These fans will be popular for use in homes, hospitals, offices, etc. where quietness in operation is important. Blades are polished aluminum finished in clear lacquer to prevent tarnishing. Adjustable pedestals for tilting. 8 foot cord with plug.

Non-Oscillating A.C.

Small Model

Something drastically different in design for a desk fan. Interestingly modernistic with entirely new lines. Base, stem and rear housing are zinc die castings, finished in black enamel with a silver bronze stripe around edge of base. Guard and guard supports also black enamel. Guard is a departure from conventional design. Center portion of front has been omitted to show the pointed blade shell and blade construction. Blade shell is die-cast aluminum on which are riveted the three blades. A tumbler switch, providing single-speed operation, is located in front of base. Base is supported on four rubber feet to prevent marring. Silk cord, rubber plug.

Net weight, 7½ lbs., shipping weight, 12 lbs.

No.	Each	Volts	Current	Speed	Watts
55X164G	$13.95	110	60 Cycles A.C.	1425	40
55X166G	13.95	110	50 Cycles A.C.	1300	40

Oscillating A.C. and D.C.

Motor, oscillating features and base of the oscillating Quiet-Type Fans are similar to those used on Standard fans. The guards are conventional in design but very deep to accommodate the fan blades. Perforated base for wall mounting. A felt strip on base prevents marring. Entire finish black enamel with exception of blades.

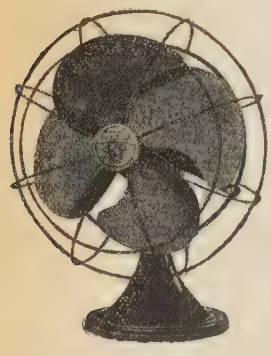
Small Model, 3 Blades

Motor, oscillating feature and base of this fan are similar to those used on the Standard 10-inch Oscillating Fan. Three deep-pitch blades, single speed.

Net weight, 7½ lbs., shipping weight, 12 lbs.

No.	Each	Volts	Current	Speed	Watts
55X165G	$14.95	110	60 Cycles A.C.	1490	37
55X167G	14.95	110	50 Cycles A.C.	1310	37
49X478G	16.95	110	Direct Current	1490	23

Large Model, 4 Blades



This fan has four deep-pitch, 12-inch blades, and three speeds. Motor, oscillating feature and base are similar to those used on the Standard 16-inch Oscillating Fan.

This fan gives an air movement equivalent in cooling power to the 16-inch fan and yet has a quietness of operation equivalent to the conventional 12-inch.

Net weight, 17 lbs., shipping weight, 24 lbs.

No.	Each	Volts	Current	Speed 1	Speed 2	Speed 3	Watts
49X491G	$27.50	110	60 Cy. A.C.	1450	1200	1000	85
49X493G	32.00	110	D.C.	1450	1200	1000	65

Graybar Standard Fans

The Standard Fans are of drawn steel construction. Adjustable pedestals for tilting and a perforated base for wall mounting. Felt base prevents marring. Entire finish black enamel including the four blades. 8-foot cord.

Special finishes in colored spray enamel, chromium and electroplating may be had on special order. Samples of color shades should be sent with inquiries. Commercial color matching must be expected, exact tones and shadings not guaranteed. Net prices quoted upon receipt of specifications as to style, finish and number of fans desired.

8-Inch Oscillating and Non-Oscillating A.C.

This fan fills a long-felt need for a small yet powerful fan of high quality and low price. Sturdy single speed, induction type motor with switch mounted in back of motor case. Bearings provided with felt oil retainers, eliminating the need of frequent oiling. Steel blades.

Non-oscillating net weight, 4½ lbs., shipping weight, 7 lbs. Oscillating net weight, 5½ lbs., shipping weight, 8 lbs.

No.	Each	Volts	Current	Speed	Watts
Non-Oscillating					
27X840G	$4.60	110	60 Cycles A.C.	1600	35
37X694G	4.60	110	50 Cycles A.C.	1300	35
Oscillating					
42X528G	$9.95	110	60 Cycles A.C.	1600	35
42X529G	9.95	110	50 Cycles A.C.	1300	35

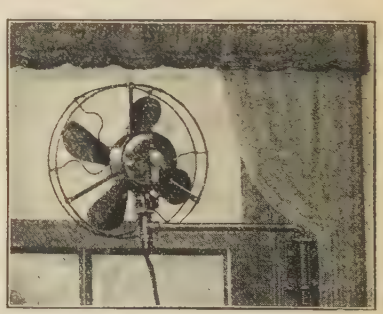
10-Inch Non-Oscillating A.C. and D.C.

Series commutator and induction types. Aluminum blades, single speed.

No.	Each	Volts	Current	Speed	Watts
*42X538G	$11.45	110	25 Cycles A.C.	1600	35
*42X539G	11.45	120	40 Cycles A.C.	1600	38
42X540G	9.95	110	50 Cycles A.C.	1350	38
42X541G	11.45	220	50 Cycles A.C.	1350	38
42X542G	9.95	110	60 Cycles A.C.	1500	35
42X543G	11.45	220	60 Cycles A.C.	1500	35
42X550G	14.45	32	Direct Current	1600	24
42X551G	12.95	110	Direct Current	1600	22
42X552G	14.45	220	Direct Current	1600	26

*Series commutator types, others are induction type.

10-Inch Household Utility Fan



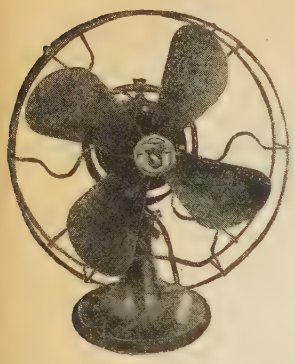
The Household Utility Fan is fitted with a swinging bracket instead of the pedestal. It can be mounted on window casing for drawing in, exhausting or circulating air, without removing screens or sash. Two bracket supports come with each fan. Extra supports can be furnished. Complete with cord, through cord switch and plug.

Net weight, 5½ lbs. to 6½ lbs., shipping weight, 9 lbs. to 11 lbs.

19X271G	$9.95	110	H.U. 60 Cycles A.C.	1500	35
28X208G	12.95	110	H.U. Direct Current	1600	22
	.50		Extra Brackets for H.U. Fans		

Graybar Standard Fans

10-Inch Oscillating A.C. and D.C.



Identical in every way with the 10-inch non-oscillating with the addition of the oscillating feature. The oscillating mechanism is mounted on the rear end of the motor cap. The 80° oscillating arc is constant.

The oscillation of these fans cannot be started or stopped while fan is running.

Net weight, 7 lbs., shipping weight, 12 lbs.

No.	Each	Volts	Current	Speed	Watts
*42X544G	$14.45	110	25 Cycles A.C.	1600	35
*42X545G	14.45	120	40 Cycles A.C.	1600	38
42X546G	12.95	110	50 Cycles A.C.	1350	38
42X547G	14.45	220	50 Cycles A.C.	1350	38
42X548G	12.95	110	60 Cycles A.C.	1500	35
42X549G	14.45	220	60 Cycles A.C.	1500	35
42X553G	18.45	32	Direct Current	1600	24
42X554G	16.95	110	Direct Current	1600	22
42X555G	18.45	220	Direct Current	1600	26

*Series commutator type, others are induction type.

12-Inch Non-Oscillating A.C. and D.C.

These are the largest non-oscillating fans in the line. Aluminum blades.

The a.c. motors are induction type except the 110 volt, 25 cycle model. This and the d.c. models have series commutator type motors.

The three speeds are regulated by a 4-position switch in the base.

Net weight, 12 lbs. to 14½ lbs., shipping weight, 27 lbs. to 28 lbs.

No.	Each	Volts	Current	Speed			Max. Watts
* 34267G	$21.50	110	25 Cy. A.C.	1600	1250	900	42
33594G	21.50	120	40 Cy. A.C.	1050	900	750	48
78716G	20.00	110	50 Cy. A.C.	1325	1200	1000	54
78718G	21.50	220	50 Cy. A.C.	1325	1200	1000	54
34017G	20.00	110	60 Cy. A.C.	1525	1400	1250	52
34018G	21.50	220	60 Cy. A.C.	1525	1400	1250	52
218168G	24.50	32	D.C.	1600	1250	950	33
34003G	23.00	110	D.C.	1600	1250	950	33
34004G	24.50	220	D.C.	1600	1250	950	37

*Series Commutator type, others are induction type.

12-Inch and 16-Inch Oscillating A.C. and D.C.

Universal swiveling provides complete lateral and tilted adjustment. Full sweep range is 90°. Oscillation can be started or stopped while fan is running, by means of the knurled control knob on top of gear case. Have a carrying handle.

12-inch net weight, 15 lbs. to 17 lbs., shipping weight 29 lbs. to 31 lbs.

16-inch net weight, 16 lbs. to 19 lbs., shipping weight 34 lbs. to 38 lbs.

12-Inch Oscillating

No.	Each	Volts	Current	Speed			Max. Watts
*75433G	$25.50	110	25 Cy. A.C.	1600	1250	900	43
75431G	25.50	120	40 Cy. A.C.	1050	900	750	48
78734G	24.00	110	50 Cy. A.C.	1325	1200	1000	55
78736G	25.50	220	50 Cy. A.C.	1325	1200	1000	55
75423G	24.00	110	60 Cy. A.C.	1510	1400	1250	53
75424G	25.50	220	60 Cy. A.C.	1510	1400	1250	53
218170G	30.00	32	D.C.	1600	1250	950	33
60559G	28.50	110	D.C.	1600	1250	950	33
60560G	30.00	220	D.C.	1600	1250	950	37

16-Inch Oscillating

*75434G	$32.50	110	25 Cy. A.C.	1500	1200	900	75
75432G	32.50	120	40 Cy. A.C.	1000	850	650	87
78738G	31.00	110	50 Cy. A.C.	1320	1125	950	78
78740G	32.50	220	50 Cy. A.C.	1320	1125	950	78
75425G	31.00	110	60 Cy. A.C.	1500	1325	1100	91
75426G	32.50	220	60 Cy. A.C.	1500	1325	1100	91
†34X899G	31.00	110	60 Cy. A.C.	960	800	600	86
218171G	36.50	32	D.C.	1500	1275	975	62
60561G	35.00	110	D.C.	1500	1275	975	66
60562G	36.50	220	D.C.	1500	1275	975	66
†42X461G	35.00	110	D.C.	960	800	600	65

*Series type. Other A.C. fans are induction type.
†Slow speed. Unusually quiet operation.

Special Types

Twelve-inch fans with enclosed motors can be furnished on special order. These fans are for use in factories and industrial plants or other locations in which damp and dusty conditions prevail.

Special types of fans for marine and railway uses, or for places where impregnated windings or enclosed motors are necessary for protection from atmospheric conditions, can also be furnished. Such fans are built on special requisitions only and are furnished in oscillating and non-oscillating models.

Prices will be submitted on specifications.

Graybar Ventilating Fans

6-Blade, 12-Inch and 16-Inch A.C. and D.C.

For removing fumes, odors and foul air. Mounted in walls or partitions to exhaust into free air. The 12-inch fan will displace about 1,000 cubic feet of air per minute; the 16-inch about 1,500 cubic feet per minute. The fans are supported in a ring frame complete and ready for mounting. Motors designed with light-weight drawn steel casings. Aluminum blades. Entire finish, motor, brackets, supporting ring and blades, black enamel.

Where it is necessary to install ventilating fans for vertical operation special bearings can be furnished at $3.00 net extra (specify whether updraft or downdraft is wanted). Fans with these special bearings are not carried in stock.

Speed controllers with 4-position regulating switches providing three running speeds can be furnished when specified. Controllers are not necessary unless speed control is required.

Net weight, 11 lbs. to 15 lbs., shipping weight, 24 lbs. to 35 lbs.

3-Speed 4 Position Speed Controller Price $5.00

12-Inch

No.	Each	Volts	Current	Controller	Max. Speed
34025G	$22.50	110	60 Cycles A.C.	106500	1600
34009G	25.00	110	Direct Current	34034	1600

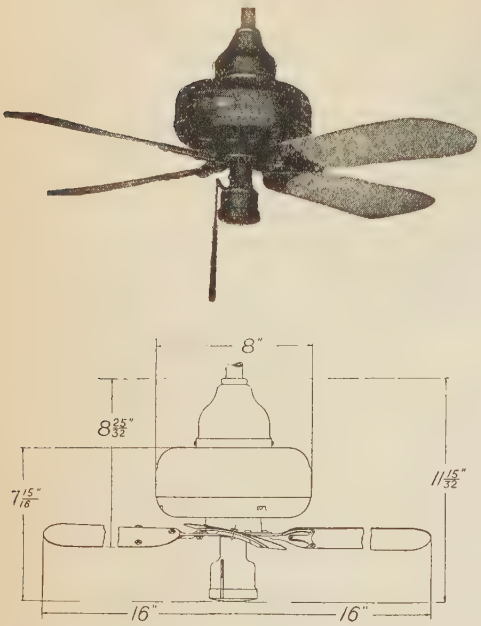
16-Inch

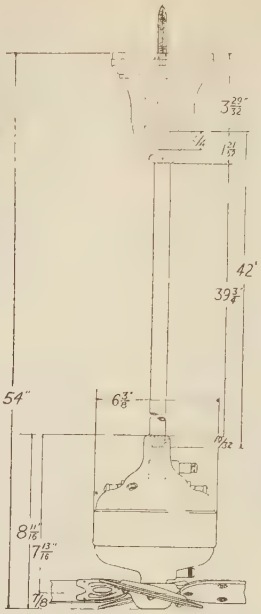
No.	Each	Volts	Current	Controller	Max. Speed
34029G	$25.00	110	60 Cycles A.C.	106508	1500
34011G	28.00	110	Direct Current	34036	1550

Both 12-inch and 16-inch Ventilating Fans also available in other voltages and frequencies.
Prices do not include cord or attachment plug.

Graybar Ceiling Fans

32-Inch Ceiling Fans





The 32-inch ceiling fans are symmetrical in shape and, because of their compactness and neat design, are especially adapted to installations not requiring the maximum of air circulation.

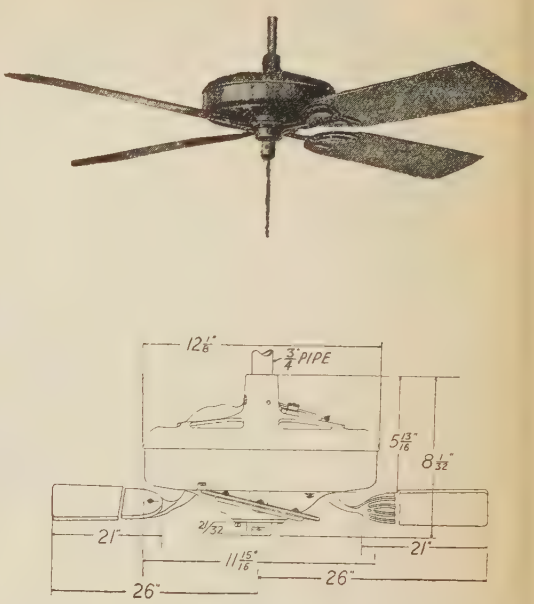
The a.c. fans have four metallic blades in unit assembly, finished in aluminum. The d.c. fans have hardwood blades finished in natural oak. All other parts are enameled in black.

D. C. fans are not equipped with switch and are single speed only. A pull cord two-speed is standard with a.c. fans.

Net weight, 24 lbs. to 27 lbs., shipping weight, 42 lbs. to 50 lbs.

No.	Each	Volts	Current	Speed		Max. Watts
146230G	$39.00	110	25 Cycles A.C.	375	275	87
146231G	39.00	120	40 Cycles A.C.	350	250	85
146233G	37.00	110	50 Cycles A.C.	350	250	70
146234G	39.00	220	50 Cycles A.C.	350	250	70
146236G	37.00	110	60 Cycles A.C.	350	250	80
146237G	39.00	220	60 Cycles A.C.	350	250	80
218176G	44.00	32	D.C.	400	...	75
146210G	42.00	110	D.C.	400	...	75
146211G	44.00	220	D.C.	400	...	75

52-Inch Ceiling Fans



The 52-inch ceiling fans are ideal for heavy duty installations. They are quiet, efficient and durable. The a.c. fan with drawn steel motor frame affords a 20 per cent reduction in weight.

Metal parts, black enamel with hardwood blades finished in a dull, natural oak.

Unless otherwise ordered, blades are arranged for a downward discharge of air. Fans for upward discharge of air may be had on special order.

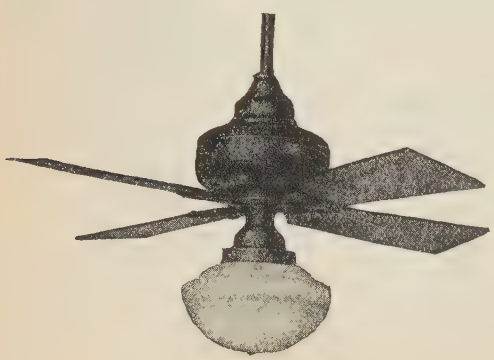
Both a.c. and d.c. have a three speed switch with pull cord.

Net weight, 41 lbs. to 45 lbs., shipping weight, 68 lbs. to 74 lbs.

No.	Each	Volts	Current	Speed			Max. Watts
62364G	$49.00	110	25 Cy. A.C.	200	150	115	140
62365G	49.00	120	40 Cy. A.C.	225	175	125	125
62367G	47.00	110	50 Cy. A.C.	220	175	125	130
62368G	49.00	220	50 Cy. A.C.	220	175	125	130
44986G	47.00	110	60 Cy. A.C.	245	195	150	145
44987G	49.00	220	60 Cy. A.C.	245	195	150	145
218178G	57.00	32	D.C.	235	175	125	120
34007G	55.00	110	D.C.	235	175	125	120
34008G	57.00	220	D.C.	235	175	125	120

Prices shown are for standard fans in regular finish and include insulated hanger, canopy and two hooks, but do not include hanger pipe. Black enameled iron hanger pipe, threaded both ends, will be furnished when specified at a slight additional cost. Special finishes made to order. Specify desired finish of wooden blades, otherwise blades will be finished to harmonize with metal parts, that is, the brass, nickel or light finishes. Blades of natural wood filled and varnished supplied with motors of darker finishes.

Quotations will be furnished on receipt of specifications stating number of fans required.



Lighting Combinations With Ceiling Fans

32-Inch and 52-Inch, A.C. Only

Graybar Ceiling Fans may be used in combination with popular commercial lighting fixtures. This makes possible an economical and simplified installation for fans and lights.

There is no additional charge for Ceiling Fans furnished with 4 or 6-inch shadeholders. Ceiling Fans furnished with extra switch for separate on and off control of light, add $1.00 to list price.

Ceiling Fans furnished less speed coil, deduct $1.00 from price. Ceiling Fans furnished less switch, deduct $1.00 from price.

Graybar-Crawford Electric Ranges

The features and design and construction of Graybar-Crawford Electric Ranges are not a matter of chance. They are the result of many years of close contact with the range buying public and dealers, and the interpretation of this contact by competent engineers and designers into terms of what the housewife wants in the way of a cooking device.

Wiring—Switches

The standard wiring of all Graybar-Crawford Ranges is for use with 3 wire, 110–220 volt service and all switches are load balancing type.

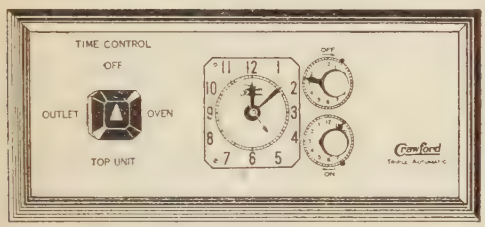
Colors

All Graybar-Crawford Ranges, except the four small apartment house models, are regularly furnished in a choice of gray and white, 2-tone ivory and pastel green and ivory full porcelain enamel.

Cast Iron Construction

The parts which get the greatest wear and abuse—the legs, cooking top, unit rings, oven and oven door frames, front frame and all brackets, as well as many concealed parts are made of cast iron. This adds rigidity to the range and prevents weaving and warping which causes most enamel chippage. The door hinge construction is exceptionally sturdy. The pins are integral parts of the cast iron front frame and fit into bearings which are a part of the door frame casting. The door stop is heavy steel. Door balance is maintained by a heavy coil spring, the tension of which can be adjusted to suit the operator.

Triple-Automatic Time Control

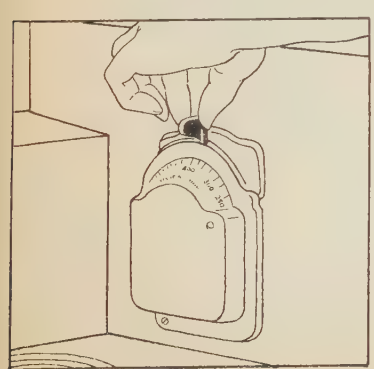


Triple-automatic time control triples the convenience of cooking with electricity. This unique feature makes it possible to automatically time control surface cooking, appliances plugged into the appliance outlet, or oven cookery.

Models 292, 290, 280 and 78 have the triple timer mechanism built in as a single unit, mounted under heat-resisting glass on shelf back and controlled by a Telechron movement electric clock. To the left of the clock dial is a selector switch that controls the unit which it is desired to time—the oven, top unit or appliance outlet—and in the case of the Epicure, the Speedwell cooker, which on this range can be time controlled by turning the selector switch to the "top unit" position. All other setting operations are done with two knobs at the right of the clock dial. Telechron timers are a.c. only, 60 cycles unless otherwise specified.

Other triple-automatic ranges are controlled by a timer clock—either hand wound No. 36 or electric wound No. 56, whichever is desired—which is plugged into a triple timer receptacle mounted in the step-back shelf. The unit which is to be controlled is selected by plugging the clock into the proper position in the receptacle.

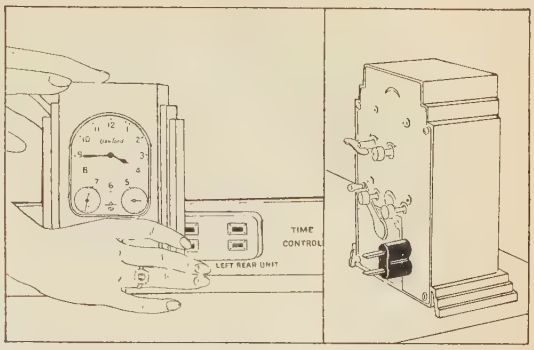
Temperature Control



A mercury switch type thermostat which works on a.c. or d.c. any cycle, and is non-radio interfering. Controls oven temperature assuring accurate cooking results without worry and maximum economy of oven operation through maintaining the temperature.

There are no delicate parts to give trouble and control is easy to calibrate.

Timer Clock



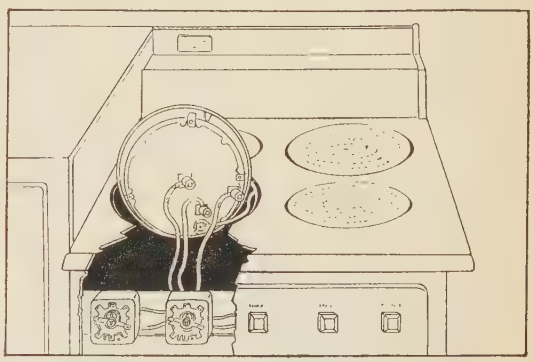
Controls cooking operations in oven, on one surface unit or appliance outlet turning heat on and off at any desired time. Rigid contacts mounted on back eliminate cord and plug.

No. 36 with 24-hour movement, nand wound. No. 56 is electric motor wound, spring drive; for a.c., 60 cycles.

Oven Indicator Light

A positive action indicator which tells when oven has reached the temperature at which thermostat has been set and is ready for use.

Monel Wiring and Unit Terminals



All top unit lead wires are monel, assuring long life. No re-wiring of ranges is ever necessary because of wire fatigue. Unit terminal studs are monel, to prevent freezing of terminal connections. The use of nickel alloy metals for the three parts—leads, coils and studs—which are brought together at the unit terminals, eliminates loose connections and therefore burnouts at this point.

Model Code

R—Right-hand oven.
L—Left-hand oven.
S—High shelf.
P—All enamel.
A—Time and temperature control.
X—Unit for warming compartment.
T—Temperature Control

Instructions for Ordering

State model number of range and add code letters, as shown, to indicate particulars and the equipment to be shipped with the range.

Specify colors desired—otherwise gray and white will be shipped.

Condiment sets, if desired, must be ordered separately unless listed as standard equipment.

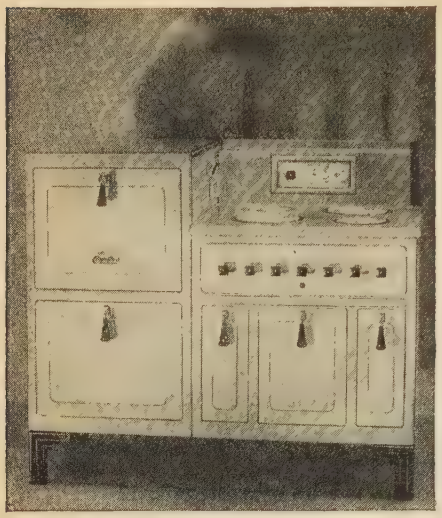
Ranges desired with cookers should be so specified, i.e.—16–77 with cooker.

When ordering controls, specify whether a.c. or d.c. and cycles. Unless otherwise specified, heating units and controls will be furnished for connection to standard 3-wire 110–220 volt service, (115 volt units) a.c. 60 cycles. Special arrangements of units or voltages other than standard are furnished at an extra charge.

Specify whether shipment is to be by rail, water, express or parcel post; give routing and lines to be used.

Graybar-Crawford Triple-Automatic Electric Ranges

No. 18-290 RPA—Epicure Model



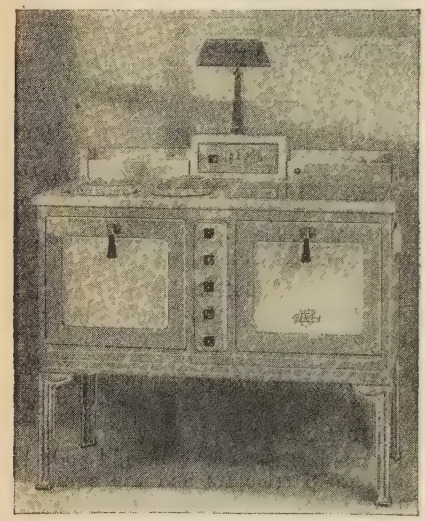
Speedwell cooker, platform lamp, foot rests, card index recipe file and condiment set are standard equipment.

Oven Size	18x14x18½″	Cooking Top Units	2–6″ 1200 Watts
Floor Space	50x28″		1–8″ 1200 Watts
Cooking Top	28¼x21″		1–8″ 2000 Watts
Cooking Top from Floor	35″	Oven: Top	1800 Watts
Warming Drawer	17½x13½x21″	Bottom	1800 Watts
Warming Unit	300 Watts	Cooker	660 Watts
Vertical Boiler	2000 Watts	Appliance Outlet	660 Watts
Ship. Weight	595 Lbs.		

No. 18-292 LPA—Two-Oven Model

Identical with above range except has second oven in place of warming drawer. Shipping wt. 645 lbs.

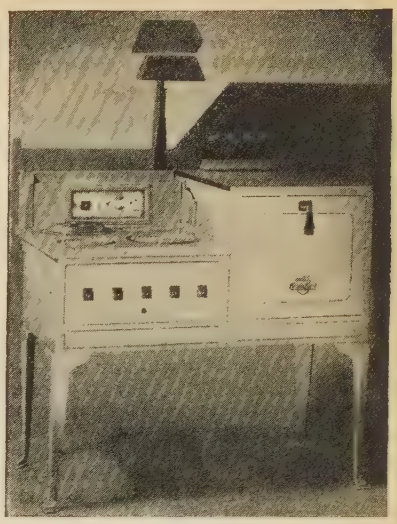
No. 16-280 RPA



Foot rests and condiment set are standard equipment. Optional equipment at extra cost: cooker, platform lamp, warming unit and removable monel work top tray. Cooker, 660 watts, when used replaces 8-inch 1200-watt unit.

Oven Size	16x14x18½″	Cooking Top Units	2–6″ 1200 Watts
Floor Space	44¼x28″		1–8″ 1200 Watts
Cooking Top	43¼x21″		1–8″ 2000 Watts
Cooking Top from Floor	36″	Oven: Top	1500 Watts
Utility Compartment	16x13¼x19¾″	Bottom	1500 Watts
Ship. Weight	400 Lbs.	Appliance Outlet	660 Watts

No. 16-78 RPA



Foot rests and condiment set are standard equipment. Optional equipment at extra cost: cooker, platform lamp.

Cooker, 660 watts, when used replaces 8-inch 1200-watt unit.

Oven Size	16x14x18½″	Cooking Top Units	2–6″ 1200 Watts
Floor Space	41½x27½″		1–8″ 1200 Watts
Cooking Top	21¼x22″		1–8″ 2000 Watts
Ht. Cooking Top from Floor	32½″	Oven: Top	1500 Watts
Ship. Weight	300 Lbs.	Bottom	1500 Watts
		Appliance Outlet	660 Watts

No. 16-477 RPA

Utility drawer under oven may be equipped with warming unit (300 watts). Optional equipment at extra cost: cooker, condiment set, timer, foot rests, warming unit.

Cooker, 660 watts, when used replaces 8-inch 1200-watt unit.

Oven Size	16x14x18½″	Cooking Top Units	2–6″ 1200 Watts
Floor Space	41x27″		1–8″ 1200 Watts
Cooking Top	21¾x22″		1–8″ 2000 Watts
Cooking Top from Floor	36″	Oven: Top	1500 Watts
Drawer Under Top	18x6½x19½″	Bottom	1500 Watts
Drawer Under Oven	15¾x6½x19½″	Appliance Outlet	660 Watts
		Ship. Wt.	360 Lbs.

Prices on Application

Graybar-Crawford Triple-Automatic Electric Ranges

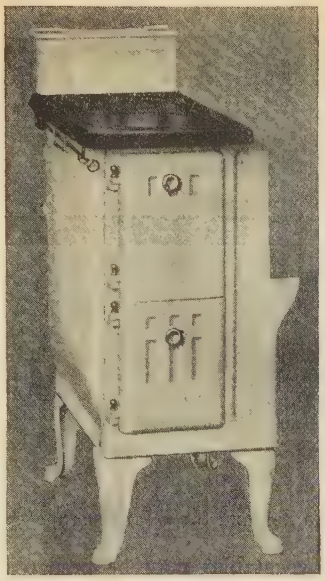
No. 16-77 RPA

Cooker, 660 watts, when used replaces 8-inch 1200-watt unit.

Optional equipment at extra cost: cooker, condiment set, timer and foot rests.

Oven Size	16″x14″x18½″	Cooking Top Units	2–6″ 1200 Watts
Floor Space	27″x42½″		1–8″ 1200 Watts
Cooking Top	22″x22″		1–8″ 2000 Watts
Ht. Cooking top from Floor	32½″	Oven: Top	1500 Watts
		Bottom	1500 Watts
Ship. Weight	265 Lbs.	Appliance Outlet	660 Watts

Graybar-Crawford Heat Ends



This heat end provides an auxiliary room and water heater, burning coal, wood, oil and other combustion fuels.

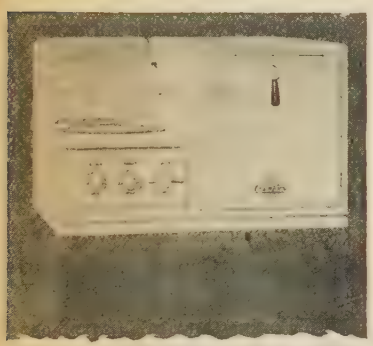
Furnished with either cast iron or brick firebox linings.

Waterfront or brass coils for heating water are extra.

Can be attached to No. 16-77 range, right hand oven only and adds 13 inches to overall length.

Size of firebox, 16¼x 7¼x8½ inches.

Shipping weight, 245 pounds.



No. 12-R40 PT Graybar-Crawford Kitchenette Ranges

This model answers the demand for a small range where conservation of space is essential. It can be built in with any cupboard-sink unit or can be fitted to the top of any refrigerator with a flat top not over 26½ inches wide, nor over 37½ inches high.

Made only in white porcelain with right hand oven.

Optional equipment at extra cost: timer with cord and plug for time controlled operation of oven.

Height	15⅝″	Cooking Top Units	1–8″ 2000 Watts
Width	26⅝″		1–6″ 1200 Watts
Depth	23⅛″	Oven: Top, Broiling	1000 Watts
Cooking Top	11¾″x21 9/16″	Bottom, Baking	1000 Watts
Oven	12⅛″x12″x17⅜″	Appliance Outlet	660 Watts
Shipping Weight	190 Lbs.		

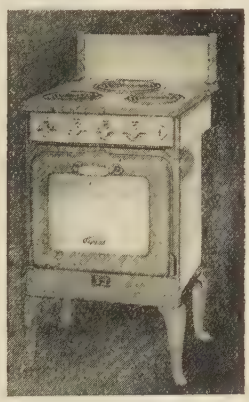
Graybar-Crawford Electric Ranges

No. 16-52 PT

In gray and white porcelain enamel.

Oven Size	16″x12″x12½″
Floor Space	18″x24″
Height Cooking Top	34″
Cooking Top Units	1–8″ 2000 Watts
	1–6″ 1200 Watts
Oven: Top, Broiling	1000 Watts
Bottom, Baking	1000 Watts
Appliance Outlet	660 Watts
Shipping Weight	140 Lbs.

No. 16-56 PT



In gray and white porcelain enamel.

Oven Size	16″x12″x12½″
Floor Space	19″x20″
Cooking Top	19″x20″
Height Cooking Top	34″
Cooking Top Units	1–8″ 2000 Watts
	2–6″ 1200 Watts
Oven: Top, Broiling	1000 Watts
Bottom, Baking	1000 Watts
Appliance Outlet	660 Watts
Shipping Weight	160 Lbs.

No. 16-251 PT

In gray and white porcelain enamel.

Oven Size	16″x12″x12½″
Floor Space	21″x23″
Cooking Top	19″x20″
Total Height	35″
Cooking Top Units	1–8″ 2000 Watts
	2–6″ 1200 Watts
Oven: Top, Broiling	1000 Watts
Bottom, Baking	1000 Watts
Appliance Outlet	660 Watts
Shipping Weight	170 Lbs.

Prices on Application

No. EC-15 Everhot Electric Cookers

This cooker will satisfy the demand for a large capacity electric cooker.

A 7-pound roast and three vegetables may be prepared at the same time in this cooker.

Has chromium-plated body. The element is guaranteed against burnout.

Equipment: No. 271 three-quart covered utensil; No. 264 half round set, each utensil 1¾ pints; No. EC-26 baking rack with 2 pie tins; No. EC-395 special roasting rack; No. EC-35 utensil lifter; No. HC-15 heater cord; No. 304 cook book.

Overall dimensions: height, 15 inches; diameter, 12 inches. Compartment: diameter, 8⅞ inches; depth, 10 inches. Liquid capacity, 10 quarts.

Wattage: 660 on high; 140 on low.

Shipping weight, 21 pounds.

No. **EC-15**....................................each **$15.00**

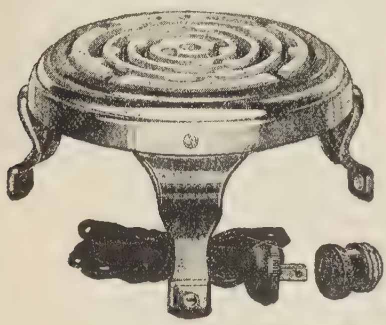
Everhot Broiler-Fryer Attachments

The Everhot Electric Cooker may be equipped with a broiler-fryer attachment, a reversible cover which has a built-in heating element that makes it possible to broil or fry steak or chops in the cooker; fry eggs and bacon, percolate coffee, etc.

No. **525**, for No. EC-10 Cooker, Shipping Weight 3 Pounds....................................each **$3.50**

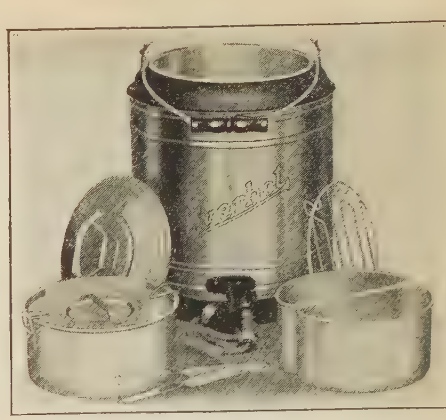
No. **530**, for No. EC-15 Cooker, Shipping Weight 4 Pounds....................................each **3.75**

Special Model Everhot Hot Plates



A single heat hot plate; consumes 600 watts. Has heater cord attached. Nickel-plated body, black enameled legs. Special Model, Shipping Weight 3 Pounds.......each **$2.00**

No. EC-10 Everhot Electric Cookers



A 4-pound roast, 8 whole potatoes, 1 quart of vegetables and 1 quart of extra vegetables may be cooked at one time in this cooker. Bakes pies and biscuits, browns like an oven. Popular for carrying hot or cold food on picnics and motor trips.

Waterless principle used. Has insulated body. Continuous cooking with current disconnected.

Body is chromium-plated and trimmed in dull ebony enamel. Has heavy seamless aluminum cooking compartment of 5-quart capacity. With strong bail and wooden handle.

Equipment: No. 161 two-quart covered utensil; No. 249 half rounds, each 1½ pints; No. EC-27 rack and 2 pan set; No. EC-34 trivet; No. EC-35 utensil lifter; No. HC-14 heater cord; No. 303 cook book.

Overall size: height, 13⅝ inches; diameter, 10 inches.

Wattage: high, 450; low, 100.

Shipping weight, 17 pounds.

No. **EC-10**....................................each **$10.00**

Everhot Electric Casseroles

No. 7

Capacity, 2¾ quarts With No.EC-77 Pyrex baking glass cover, No HC-14 six-foot heater cord, 3 point connector, rubber plug and No. 326 instruction folder.

Overall size: height, 8 inches; width, 11½ inches. Inside diameter, 7¼ inches; inside height, 4¼ inches. Diameter glass cover, 8 inches.

Wattage at 115 volts: high, 360; low, 120.

Standard package, 6; shipping weight, 63 pounds.

No. **7**....................................each **$5.50**

No. 8

Equipped same as No. 7 and with pair of seamless aluminum half round utensils No. 249-B, with capacity of 1½ pints each.

Shipping weight, 11 pounds.

No. **8**....................................each **$6.50**

No. 9

Equipped same as No. 7 and with No. 525 electric broiler and fryer and broiling rack. Top element provides for broiling in casserole or may be used separately as a hot plate. Upright it may be used for any open burner purpose (frying, broiling, percolating); reversed (element side down) it is an efficient broiler for steaks, chops, etc. Broiler, 660 Watts. Shipping weight, 13 pounds.

No. 525 Broiler and Fryer

No. **9**....................................each **$8.50**

No. 625 Everhot Casserole-Hot Plate Combinations

The surface burner, combined with the casserole, makes a fairly complete outfit for the light housekeeper, the summer cottage and the kitchenette apartment. Dozens of different foods may be cooked in the insulated casserole compartment. Can be used for many kinds of baking and roasting.

The casserole has a capacity of 2¾ quarts, enough for a family of 8 persons. The seamless aluminum compartment is equipped with removable aluminum utensil insert and Pyrex glass cover. Controlled by a 3-heat range switch.

Body is vitreous enameled, light green speckled color; black trim; has ball feet.

Two range type switches; separate control of hot plate and casserole or work simultaneously.

Equipped with No. 265 aluminum insert and No. EC-77 glass cover.

Hot plate is 6⅝ inches in diameter; has 3 heats—700 high; 350 medium; 175 low.

Casserole wattage: 500 high; 250 medium; 125 low.

Shipping weight, 23 pounds.

No. **625**..each **$13.85**

Everhot Kitchen Compakts

No. 630

Note the drawer. This is the broiling and baking section; contains a removable aluminum pan and a broiling rack.

Toasting is done on the square heating element above the drawer—4 slices—and also on the broiling rack, totaling 8 slices at one time when desired. Frying, coffee-making, etc., may also be done on the square burner. Has hinged cover.

Left-hand element is used for boiling, frying, etc.

Has two 3-heat switches.

Body is porcelain enameled in a delicate shade of green. Oven lining is rust-resisting steel.

Equipped with No. 11 square oven roaster and HP-314 rack.

Length 20⅛ inches; width, 11½ inches; height to top of deck, 6¼ inches; height to top of splasher back, 9¼ inches.

Wattage: Left-hand burner, 550 high; 275 medium; 135 low; right-hand burner, 1100 high; 550 medium; 275 low. Total watts, 1650.

No. **630**, Shipping Weight, 30 Pounds..........each **$19.95**

No. 632

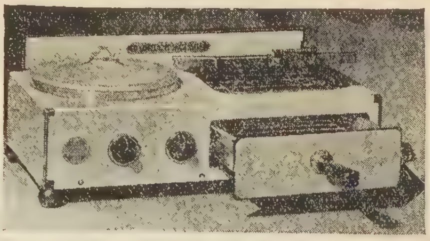
Same as No. 630 without the left-hand burner as illustrated above.

Dimen. 11½x12½x7 in. high. Wattage 1100 high, 350 low.

No. **632**, Shipping Weight, 18½ Pounds.........each **$12.50**

Everhot Kitchen Compakts

No. 631



The casserole prepares escalloped dishes, cooks vegetables, bakes biscuits, etc. Has pyrex glass cover; capacity, 2¾ quarts.

The drawer section broils, bakes, toasts and fries. Each section controlled by a 3-heat range switch.

Body is porcelain enameled in a delicate shade of green.

Equipped with casserole, No. 265 aluminum inset; broiler-fryer, No.11 square oven roaster. HP314 rack.

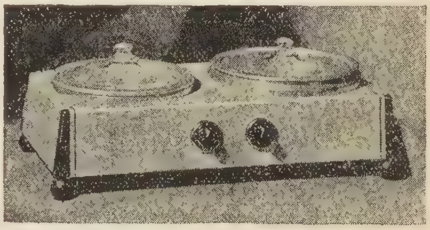
Length, 22 inches; width, 11½ inches; height to top of deck, 6¼ inches; height to top of splasher back, 9¼ inches.

Wattage: Casserole, 500 high, 250 medium, 125 low; broiler-fryer section, 1100 high, 550 medium, 275 low. Total 1600 watts.

Shipping weight, 32½ pounds.

No. **631**..each **$23.50**

No. 627



Consists of one 2¾-quart and one 4-quart casserole. Each has removable aluminum insets and pyrex glass covers; fully insulated. Each casserole controlled by 3-heat range switch. The larger inset has a removable partition and false bottom so that two foods may be cooked at one time.

Body is porcelain enameled in a delicate shade of green.

Equipped with No. 265 and No. 274 insets.

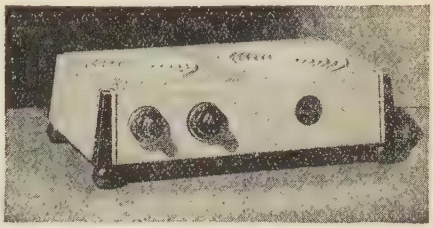
Length 22¾ inches; width, 11 inches; height, 5¾ inches.

Wattage: Small casserole, 500 high, 250 medium, 125 low; larger casserole, 600 high, 300 medium, 150 low.

Shipping weight, 26 pounds.

No. **627**..each **$21.00**

High Speed Hot Plates



No. 624

Has one 6⅝-inch and one 8-inch surface burner; Each burner controlled by 3-heat double pole range switch.

Body is porcelain enameled in a delicate shade of green.

Length, 18 inches; width, 10 inches; height, 5¾ inches.

Wattage: Small burner, 660 high, 330 medium, 165 low; large burner, 990 high, 495 medium, 248 low. Total, 1650 watts.

Shipping weight, 20 pounds.

No. **624**..each **$12.50**

No. 623

Has 6⅝-inch burners. Dimensions, finish and shipping weight same as No. 624. Two switch control.

Wattage: Each burner, 660 high, 330 medium, 165 low. Total, 1320 watts.

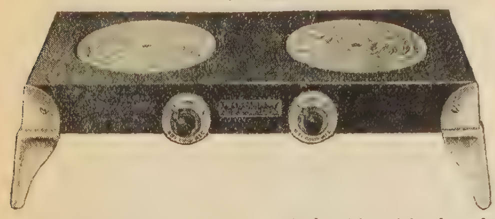
No. **623**..each **$10.00**

Proctor Hotplates

Capacity, 110 volts a.c. or d.c., 1500 watts. With two 750-watt elements in 6-inch refractory bases. Frame, 8½x18 inches; 16-gauge steel legs and handles, nickeled.

Packed in individual cartons. Shipped in cases of 6.

No. 402



Twenty-gauge steel frame; cobalt blue-black vitreous enamel finish. Controlled by two 3-heat rotary switches.

Weight, 12¾ pounds. Case shipping weight, 63 pounds.

No. **402**, With Cord and 2-Piece Plug............each **$8.45**

No. 404

Twenty-gauge Armco iron frame; blue-black skirt, white vitreous enamel top or marbleized green with tinted refractories. Unless color is specified, white top will be furnished.

Controlled by two 3-heat reciprocating switches.

Weight, 10⅛ pounds. Case shipping weight, 65 pounds.

No. **404**, With Cord and 2-Piece Plug...........each **$10.65**

Proctor Hotplates

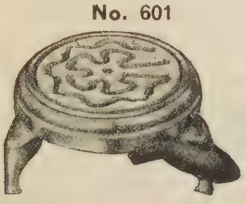
Frame and coaster legs are of 20-gauge steel, nickeled.

Furnished with genuine nickel chromium element.

Equipped with suitable gauge silk-covered heating cord and 2-piece plug.

Packed in individual cartons. Shipped in cases of 12 to 24.

No. 601



Capacity, 110 volts a.c. or d.c., 660 watts.

Element mounted in 5¼-inch special refractory base.

Weight, 2¾ pounds. Shipping weight: 12 in case, 33 pounds; 24 in case, 70 pounds.

No. **601**, With Cord and 2-Piece Plug...........each **$2.85**

No. 701

Capacity, 110 volts a.c. or d.c., 500 watts.

Element mounted on thick composition heat and current insulator mat. Diameter, 7 inches; height, 4 inches.

Weight, 2¼ pounds. Shipping weight: 12 in case, 30 pounds; 24 in case, 55 pounds.

No. **701**, With Cord and 2-Piece Plug...........each **$2.50**

Nesco Electric Casseroles

Capacity, 2 liquid quarts.

Has self seal waterless cooking feature and bakelite knob.

In cartons. Six cartons to a shipping container.

Made in 110–120 volts.

No. B50
Colonial Model

Ivory and green finish.

Wattage: high, 325; low, 100.

Shipping weight of 6 cartons, 50 pounds.

No. **B50**....................................each **$5.50**

No. B45
Princess Model

Has removable cooking well.

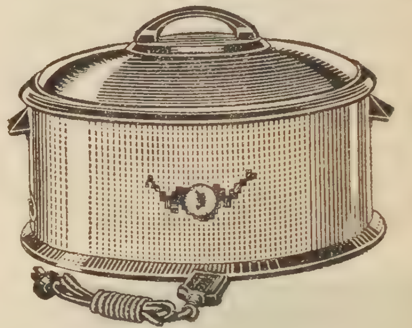
Modernistic chromium finish.

Wattage: high, 425; low, 130.

Shipping weight of 6 cartons, 60 pounds.

No. **B45**.........each **$8.50**

No. R95 Nesco Electric Roasters



Colonial Model

Capacity, 6 liquid quarts.

Will accommodate a 6-pound fowl or a 10-pound ham. Cooks a complete meal.

With porcelain enameled cooking well, heating well and cover; japanned sides and base; bakelite handles; rubber feet.

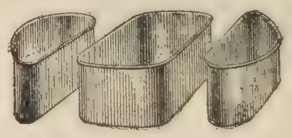
Length of cooking well, 12 inches; width, 8½ inches; depth, 6 inches.

Has heating units on sides and bottom. Wattage at 115 volts: high, 635; low, 275. Made in 110–120 volts.

In individual cartons; weight, 15 pounds.

No. **R95**, Ivory and Green Finish..............each **$10.50**

No. R3-95 Nesco Cooking Sets



For cooking a whole meal this set is indispensable. Made of heavy gauge metal; enameled to match interior of roaster.

The two end pans are each of 1 quart capacity and the center pan of 2½ quart capacity.

In cartons. Six cartons to a shipping container; weight, 28 pounds.

No. **R3-95**....................................each **$1.75**

No. R5-95 Nesco Baking Sets

Constructed of heavy tin plate. Fits into cooking well of roaster, which accommodates one pan at a time.

Pie and cake pans are 8 inches in diameter. Size of bread pan, 9⅞x4⅝x3 inches.

In cartons. Six cartons to a shipping container; weight, 17 pounds.

No. **R5-95**....................................each **$.60**

M-B Electric Coffee Services

110-125 Volts, 350 Watts

The urns of these coffee services are protected from overheating by a fuse device which prevents damage to the urn if it is allowed to boil dry or is started without water. Faucets are dripless.

Sugar bowls and creamers are gold-lined.

Chromium-plated finish.

No. K4780/9—Canterbury Pattern

Has jet black handles with small contrasting bands of ivory.

Standard package, 2. Shipping weight each, 15 pounds.

No. K4780/9, Set of 4 Pieces.....each $29.95
No. K478/9, Urn, 9-Cup Cap., 14½ Inches High each 13.45
No. K144, Sugar Bowl and Creamer.....each 8.00
No. K4518, Tray, 19x11½ Inches Overall.....each 8.50

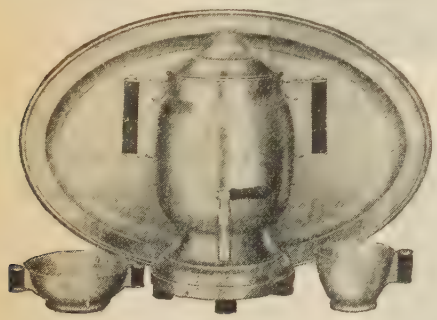
No. K4760/8—Radcliffe Pattern

Handle mounts are of red or jet black Arinite.

Standard package, 2. Shipping weight, each, 10 pounds.

No. K4760/8, Set of 4 Pieces.....each $19.95
No. K476/8, Urn, 8-Cup Cap., 15 Inches High each 9.95
No. K141, Sugar Bowl and Creamer.....each 6.50
No. K2718, Tray, 18x11¾ Inches Overall.....each 3.50

No. K4750/9—Weyburne Pattern



Mounts on sugar and creamer are ebonized to match urn.

Standard package, 2. Shipping weight each, 12 pounds.

No. K4750/9, Set of 4 Pieces.....each $15.95
No. ....., Urn, 9-Cup Cap., 10½ Inches High each .....
No. ....., Sugar Bowl and Creamer.....each .....
No. ....., Tray, Inches Overall.....each .....

M-B Electric Coffee Services

110-125 Volts, 350 Watts

No. K4770/9—Norham Pattern

Protected from overheating by a fuse device which prevents damage to urn if it is allowed to boil dry or is started without water. With dripless faucet.

Sugar bowl and creamer are gold-lined. Decorated with gemlike Arinite either in red or jet black. Chromium-plated finish.

Standard package, 2. Shipping weight each, 13 pounds.

No. K4770/9, Set of 4 Pieces.....each $24.95
No. K477/9, Urn, 9-Cup Cap., 14 Inches High.....each 13.45
No. K142, Sugar Bowl and Creamer.....each 6.50
No. K4418, Tray, 22x11¾ Inches Overall.....each 5.00

M-B Electric Percolators

110-125 Volts, 350 Watts

No. K369/7—Bexley Pattern

Capacity, 7 cups.

Has heavy copper body, hinged cover, dripless spout, obscure terminal guard and ebonized handle.

Chromium-plated finish.

Height, 11 inches.

Standard package, 3. Shipping weight each, 5 pounds.

No. K369/7.....each $13.50

No. K28—Wrentham Pattern

Capacity, 7 cups.

Has heavy copper body, dripless spout and ebonized wood handle.

Chromium-plated finish.

Height, 11½ inches.

Standard package, 6. Shipping weight each, 5 pounds.

No. K28.....each $9.95

No. K379/7—Wickshire Pattern

Capacity, 7 cups.

Has heavy copper body, ebonized handle and dripless spout.

Chromium-plated finish.

Height, 10¾ inches.

Standard package, 6. Shipping weight each, 5 pounds.

No. K379/7.....each $6.95

Silex Glass Coffee Makers
Combination Electric and Gas Models

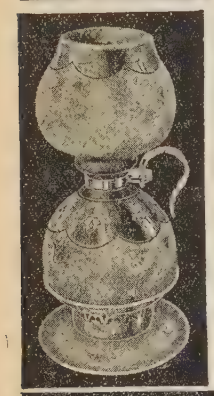
Made of non-tarnishing chrome. Knob on cover, the ring insulating the handles and holding lower decorator shell in place are ebony composition. Pyrex heatproof glass is used. Regularly furnished for 110–120-volt circuits; special voltages can be supplied at 50 cents per element extra.

Lido Model

In 4, 6 and 8-cup sizes, taking UP and LP bowls. Metal decorator for lower bowl matches in motif the pattern of the 550-watt stove.

No. LE42, 4-Cup Size....each **$8.95**
No. LE62, 6-Cup Size....each **9.45**
No. LE82, 8-Cup Size....each **9.95**

May be purchased without decorative shells and tea cap stopper at $1.00 less.



Pinehurst Model

Made in 6-cup and 8-cup sizes.

Supplied with decorative shell and cover similar to those supplied with Lido model. Takes LK6 and UK6 bowls. Tea cap is supplied.

No. HE62, 6-Cup size...each **$7.95**

No. HE82, 8-Cup size...each **7.95**

Coronado Model

This unit embodies all the features of the more expensive models and yet is low priced.

Available in 6-cup and 8-cup sizes.

Takes LK6 and UK6 bowls.

No. KE6D, 6-Cup size.each **$6.95**

No. KE8D, 8-Cup size.each **6.95**

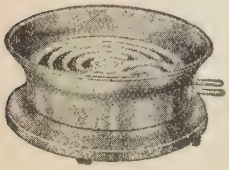
Coffee Maker May Also Be Used as Tea Maker

The new stopper for the lower bowl may be used as a cover when serving coffee, or will allow the use of the Silex as a tea maker.

A slot is provided in the cover so that the string from the tea bag may be wound around the knob. Tea or coffee is poured with the stopper in place.

Furnished with Lido and Pinehurst models or may be bought separately at 50 cents.

Silex Warming Stoves



May be placed at strategic serving locations to keep a bowl of brewed coffee at drinking temperature indefinitely without boiling.

Stove is chrome plated.

Standard package, 3.

No. SW80, 80 Watt.....each **$3.45**
Model SUS, 660 Watt....each **4.45**

Silex Glass Coffee Makers

Model BE—4 Units

This coffee maker has an operating capacity of approximately 225 to 300 cups per hour. Size, 27x7¼x4½ inches. With 4 glass assemblies and 50 strainer cloths.

Range is stainless steel; unit reflectors chromium-plated. With 440-watt elements; 660-watt elements on special order. Pyrex heatproof glass is used. Necessity of removing glass from range is avoided with quick cooling units. Patented filter produces amber clear coffee.

No. of Cups	Size Ounces	With Quick Cooling Elements — No.	Each	With Slow Cooling Elements — No.	Each
9–11	52	BE-1	$56.95	BE-2	$53.95
7– 9	42	BE-3	52.95	BE-4	49.95
Range Only ..		BRE-1	32.95	BRE-2	29.95

Model CE—2 Units

Same as Model BE, except has 2 units; operating capacity, 115 to 150 cups per hour. Size, 14x7½x4½ inches. With 2 glass assemblies and 50 strainer cloths.

No. of Cups	Size Ounces	With Quick Cooling Elements — No.	Each	With Slow Cooling Elements — No.	Each
9–11	52	CE-1	$33.95	CE-2	$31.95
7– 9	42	CE-3	31.95	CE-4	29.95
Range Only ..		CRE-1	21.95	CRE-2	19.95

Silex Coffee Maker Assortments

Ideal for the small restaurant or operator serving a limited amount of coffee. Consists of a complete making unit, extra lower bowl and 80-watt warming stove permitting the storage of coffee indefinitely without boiling and insuring a reserve of coffee always ready for serving while the making unit is being used for a fresh brew.

Standard package, 3.

No. DE8, 7–9-Cup Size.....each **$15.95**
Model DEC, 9–11-Cup Size.....each **17.45**

Silex Single Unit Glass Coffee Makers

This unit is ideal for placing along the backbar where space does not permit passing to one central dispensing point.

Stove and handle are chrome.

Standard package, 3.

No. of Cups	With Stove — No.	Each	Without Stove — No.	Each
7–9	SE-82	$8.95	G-82	$4.95
9–11	SE-92	9.95	G-92	5.95

No. DS2 Silex Deauville Model Coffee Service

Combination Electric and Gas Model

Made in 6-cup size only in non-tarnishing chrome. Tray is 18x11 inches overall; heavy gauge 18 per cent nickel silver. Sugar and creamer are 18 per cent nickel silver, gold lined. Metal decorator is attractively pierced. The feet, handles on tray, knob on cover, ring insulating the handle and holding lower decorator shell in place are all ebony composition.

Pyrex heatproof glass is used. The bowls are regular UP6 and LP6. Furnished with stopper for lower bowl that may be used for cover for coffee service or which will allow the use of the Silex as a tea maker with tea bag.

Regularly furnished for 110–120-volt circuits; special voltages can be supplied at 50 cents per element extra.

No. DS2, Complete.....each **$27.00**

M-B Automatic Electric Drip Coffee Urns

No. K252/6—Sussex Pattern

110-125 Volts, 350 Watts—A.C. Only

Capacity, 6 cups. The automatic device guarantees excellent coffee; keeps it hot indefinitely.

Operation: Cold water is placed in lower compartment, finely ground coffee in basket in upper compartment. When attached to lighting current a small quantity of water at proper temperature is pumped up tube where it drips back through coffee in basket.

Has ivory handles and feet; chromium-plated finish.

Height, pewter-lined urn, 12½ in.

Standard package, 3. Shipping weight each, 8 pounds.

No. K252/6.....each **$12.50**

No. 101/2 M-B Electric Tobacco Lighters

110-125 Volts, 100 Watts

This lighter will light a pipe, cigar or cigarette equally well.

Operates on the principle of heated air and the tobacco does not come in contact with the unit.

Height, 7 inches.

Finished in statuary bronze.

Equipped with a cord to match.

Standard package, 6. Shipping weight each, 6 pounds.

No. **101/2**.....each **$5.00**

Model A Sunbeam Coffee Makers

A glass coffee maker with a capacity of 8 cups.

Complete with two graceful heat-proof glass bowls, chrome-plated table stove and cover, black handle.

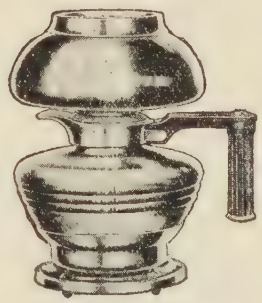
Glass stopper rod does away with filter cloths, springs, etc.

Coffee comes in contact only with glass—no metallic taste.

Height, 11 inches.

Model A.....each **$6.50**

Model B Sunbeam Coffee Makers



This glass coffee maker has a capacity of 8 cups.

With handy spout—a permanent part of the lower bowl. Chrome finished table stove and cover, heat-proof bowls, black handle.

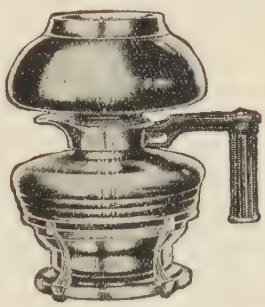
Glass stopper rod does away with filter cloths, springs, etc.

There is no metallic taste—coffee comes in contact only with glass.

Height, 9 inches.

Model B.....each **$8.95**

Model C Sunbeam Coffee Makers



An efficient coffee maker with a capacity of 8 cups.

Has handy spout—a permanent part of the lower bowl. With special de luxe decorative chrome stove, black handle, heat-proof bowls.

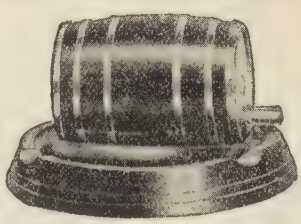
Glass stopper rod does away with filter cloths, springs, etc.

There is no metallic taste—coffee comes in contact only with glass.

Height, 9 inches.

Model C.....each **$10.45**

Sunbeam Smokemasters



Press button and out comes a cigarette. One puff—and it lights itself.

Holds a full package of cigarettes.

Black metal barrel with chrome trim and rich black ash-tray base.

Model **6**, with Barrel on Side.....each **$3.50**
Model **7**, with Barrel Upright.....each **3.50**

M-B Electric Toasters

No. K63—Fernleigh Pattern

110-125 Volts, 550 Watts

This two-slice tip and turn toaster has a mica wound unit and because of its attractive design is a popular appliance.

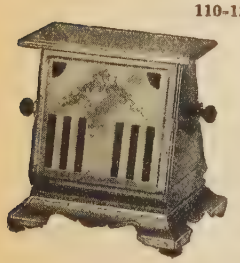
Finished in chromium plate; handles and feet are of contrasting ebony.

Standard package, 6. Shipping weight each, 4 pounds.

No. K63.....each **$3.95**

No. K69—Stancliffe Pattern

110-125 Volts, 550 Watts



Has an efficient mica wound unit and the tip and turn feature. Just lower the doors for toasting the two slices of bread on the other side.

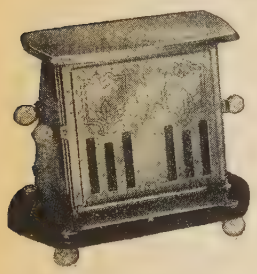
Finished in chromium plate; ebonized mounts.

Standard package, 6. Shipping weight each, 4 pounds.

No. K69.....each **$3.95**

No. K76—Lyndhurst Pattern

110-125 Volts, 550 Watts



Toasts two slices of bread at a time. Has mica wound unit and reversible feature. Lowering the doors turns the bread for toasting on the other side.

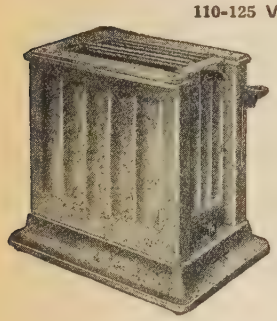
Finished in chromium plate with black Arinite base. Handles and feet are of the same material available in the following two-color combinations: red balls with black collars or ivory balls with black collars.

Standard package, 6. Shipping weight each, 4 pounds.

No. K76, with Red or Ivory Handles and Feet..each **$6.75**

No. K105—Automatic Type

110-125 Volts, 680 Watts



This toaster toasts two slices of bread, both sides, at once. By means of the adjustable heat control lever, toast is browned just the way desired, and current automatically clicks off, telling when toast is done.

Chromium-plated finish; ebonized mounts. Has crumb drawer to keep toaster clean.

Standard package, 3. Shipping weight each, 8 pounds.

No. K105.....each **$12.50**

No. K600 M-B Electric Chafing Dishes

110-125 Volts, 550 Watts

For preparing rarebits, relishes, game dishes, candies and dozens of other recipes. Because of the special low heat unit, this dish can be used for keeping foods hot. Has two degrees of heat.

Finished in chromium plate with either red or jet black handles of gemlike Arinite.

Capacity of pans, 3 pints. Height, 9¼ inches; diameter of base, 11½ inches.

Furnished with a complete recipe booklet giving most of the famous chafing dish recipes.

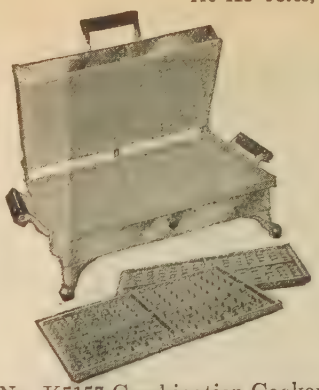
Standard package, 3. Shipping weight, each, 10 pounds.

No. K600, with Red or Black Handles.....each **$14.95**

M-B Combination Cooker and Waffle Iron

No. K5157

110-125 Volts, 800 Watts



Can be used as a double grid, or closed to cook both sides at once; bakes, broils, fries, toasts sandwiches and by interchanging the waffle grids, bakes waffles.

A simple device incorporated in hinge, holds cover in half open position. With grease drain on lower grid. Removable grids are easily washed.

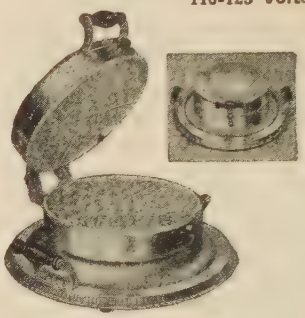
Finished in chromium plate with ebonized handles.

Standard package, 3. Shipping wt., ea., 15 lbs.

No. K5157 Combination Cooker-Waffle Iron....each **$14.95**
No. K515 Cooker Only.....each **11.95**
No. 7 Waffle Grids, Size 7x11 Inches.....each **3.00**

No. K508

110-125 Volts, 660 Watts



May be used as an open grid or closed to cook both sides at once; bakes, broils, fries, toasts sandwiches and bakes waffles.

Interchangeable grids are pure aluminum, 7 inches in diameter. A special type hinge holds cover in half open position. Chromium-plated finish; ebonized wood handles.

Standard package, 6. Shipping weight, each, 10 pounds.

No. K508, Complete.....each **$8.75**

No. 1420 Proctor 2-Slice Automatic Glow-Cone Toasters

Turnover Type

Toasts 2 slices of bread one side at a time, the bread turning itself for toasting the other side as doors are flipped open and shut by a finger touch to the door handles.

Crystal glow cone, in crown of toaster, is lighted up by heating element when bread is toasting. When toasting is done, thermostat automatically shuts off current and glow-cone light goes out.

Pointed adjuster knob on control dial regulates setting of thermostat to give any degree of toasting from light to dark. Finished in chromium plate.

For use only with a.c., 110–120 volts, 500 watts.

Height, 7½ inches. Table space, 7¾x4¾ inches.

Single package, 3¼ pounds. Standard carton of 6 packages; weight, 22 pounds.

No. 1420.....each **$6.75**

No. 25 M-B Disc Stoves

110-125 Volts, 550 Watts

A 3-heat, nickel-plated disc stove which can be used for a variety of odd jobs about the house, workshop or factory.

Shipping Weight, 5 pounds.

No. 25.....each **$7.50**

M-B Electric Waffle Irons

No. K1638—Fenway Pattern

110-125 Volts, 660 Watts

Heat indicator in cover gives correct baking temperature. Grids are 7 inches in diameter. Lower one is equipped with batter trough to catch any overflow.

Chromium-plated finish. Arinite handle mounts: black balls with ivory collars or red balls with black collars.

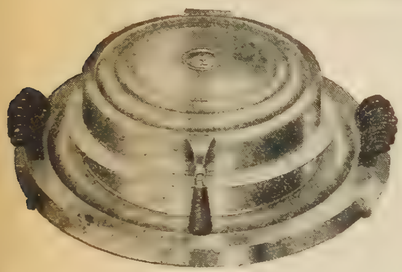
Overall diameter, 11¼ inches.

Standard package, 6. Shipping weight each, 6½ pounds.

No. **K1638**, with Red or Black Handle Mounts...each **$7.95**

No. K1637—Chatham Pattern

110-125 Volts, 660 Watts



With aluminum grids; batter trough on lower one. Heat indicator gives correct baking temperature.

Chromium-plated finish; jet black moulded handles.

Diameter, 11¼ inches; height, 3¾ inches. Standard package, 6.

No. **K1637**, Shipping Weight 6½ Pounds........each **$6.50**

No. K1641—Dunkirk Pattern—Automatic Type

110-125 Volts, 800 Watts—A.C. Only

By means of an adjustable level, waffles may be baked light or dark. Small red light in cover signals when waffle is done; automatic thermostat in base.

Finish and grids same as No. K1637. Diameter base, 11⅛ inches; diameter grids, 7 inches. Standard package, 6.

No. **K1641**, Shipping Weight, 7 Pounds..........each **$9.50**

No. K1640—Stanwick Pattern—Automatic Type

110-125 Volts, 800 Watts—A.C. Only

Small red light in cover flicks out when waffle is done; thermostat in base shuts off current. Adjustable bake control allows waffles to be baked light or dark.

Chromium-plated finish with black rings of baked enamel inlay on cover and base; black and ivory Arinite handles. Aluminum grids with batter trough on lower one to catch any overflow.

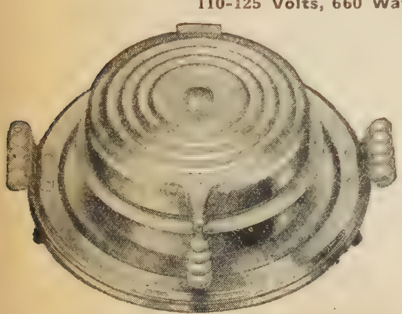
Diameter base, 11⅛ inches; diameter grids, 7 inches.

Standard package, 6.

No. **K1640**, Shipping Weight, 7 Pounds.........each **$10.50**

No. K1639—Fenley Pattern

110-125 Volts, 660 Watts



Heat indicator in cover gives baking temperature.

With aluminum grids; batter trough on lower one to catch any overflow.

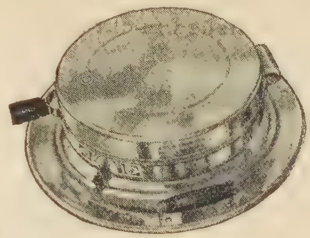
Chromium-plated finish; ivory Arinite handles.

Diameter, 11⅛ inches; height 3¾ inches; diameter grid, 7 inches. Standard package, 6.

No. **K1639**, Shipping Weight, 6½ Pounds........each **$6.95**

No. 15102 Proctor Automatic Glow-Cone Waffle Irons

Makes a 7-inch waffle. Crystal glow cone set in lid, glows when heat is on. When light goes out, thermostat has automatically shut off heat. Proper temperatures for preheating grids or baking are selected by a turn of adjuster knob on control dial. Knob also serves to switch current off by hand.



Chromium plated finish.

Dimensions, 11⅛x4 inches. Capacity, 700 watts, 120 volts a.c. only.

With 6-foot cord and plug.

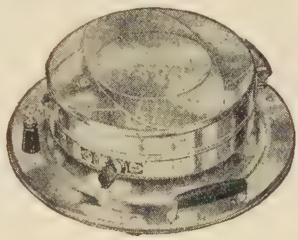
Weight, 6 pounds. Standard cartons of 6; weight, 50 pounds.

No. **15102**........each **$7.95**

No. 15101 Proctor Automatic Glow-Cone Waffle Irons

DeLuxe Model

A chromium-plated iron which makes a 7-inch waffle. Crystal glow cone set in lid, glows when heat is on. When light goes out, thermostat has automatically shut off heat. Proper temperatures are selected by a turn of adjuster knob on control dial. Knob also serves to switch current off by hand.



Dimensions, 11⅛x4 inches. Capacity, 700 watts, 120 volts a.c.

With 6-foot cord and plug.

Weight, 6 pounds. Standard cartons of 6; weight, 50 pounds.

No. **15101**......each **$11.50**

No. F3 Waffle-Witch

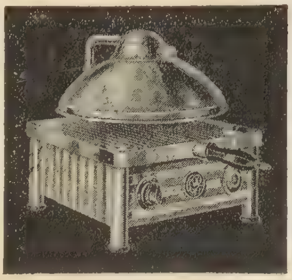
A complete waffle unit with bowl, ladle and grids all in one. Ladle holds just enough for one waffle.

Chromium-plated finish.

No. **F3**.........each **$15.00**

Silex Hi-Speed Broilers

The extremely intense heat from a 2000 watt core type heating element, properly focused in the reflector, is reflected uniformly over the entire cooking area. Food is placed immediately below the reflector on a removable griddle which is ribbed on one side and flat on the other.



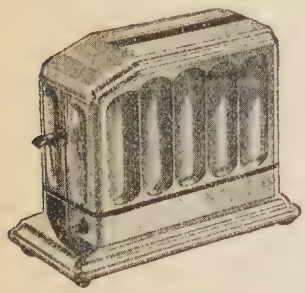
Broils ordinary steaks and chops on both sides in 4 to 7 minutes; hamburgers and frankfurters in 3 to 5 minutes. Broils chickens, fish and even small lobsters. Will shir eggs, toast bread cinnamon toast.

Capacity, 10 to 12 tenderloin steaks or approximately 125 to 140 per hour.

Each **$29.95**

Toastmaster Automatic Toasters

This toaster toasts automatically. The bread is dropped into the oven slot, one lever is pressed down; the whole operation is controlled by pressing one lever. When toast is done it pops up and current is automatically turned off.



The degree of toasting is easily regulated. A perfect slice of toast is delivered in a little over a minute.

Finished in chromium plate.

Style.....	1-Slice	2-Slice
Each.....	$11.50	$16.00
Length..in.	9	9
Width..in.	4⅝	6¼
Height..in.	7⅛	7⅛
Wattage...	600	1050
Shipping Wt...lbs.	4⅞	6¾

Wafflemaster Automatic Waffle Irons

Capacity, one 7-inch waffle.

A red signal shows when grids are the right heat for the batter. When waffle is done signal light changes and current is automatically cut down to low heat.

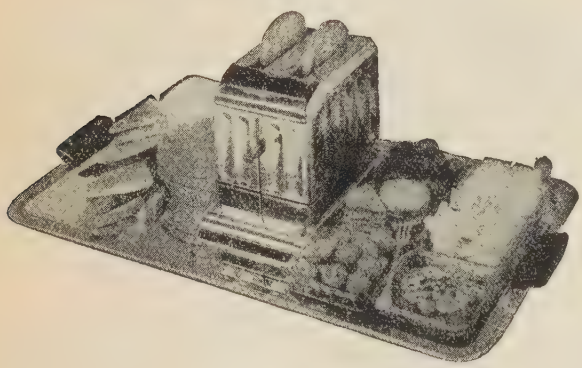
Finished in chromium plate. Artistic drip ring around grids is removable for easy cleaning.

Width of base, 9 inches; depth of base, 9 inches. Overall dimensions: width, 11 inches; depth, 10 inches; height, 4½ inches. Wattage, 800.

Packed 1 in a carton; shipping weight, 10¾ pounds.

Each..... $14.50

Toastmaster Hospitality Units



This unit consists of a chromium-plated tray, cutting block and knife, 6 crystal-clear glass dishes for butter, cheese, etc., and the new flexible clock Toastmaster.

Dimensions of tray: width, 14⅛ inches; length, 25¼ inches; depth, 1⅝ inches.

2-Slice Toastmaster and Tray Complete.....each $19.75
1-Slice Toastmaster and Tray Complete.....each 15.25
Hospitality Tray Only.....each 7.50

GraybaR QUALITY Since 1869 — Distributed and guaranteed by GraybaR ELECTRIC COMPANY

No. 193 Hankscraft Special Egg Cookers

This cooker is simple to operate. Just place the eggs in the cooker with the proper amount of water and when steam stops, the eggs are done.

Cooks eggs evenly throughout.

Capacity, 4 eggs.

Has copper dome and ivory base.

Standard package, 4.

No. 193.....each $2.95

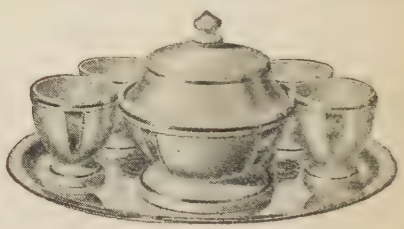
No. 1933 Hankscraft Special Egg Service Sets

The No. 1933 set includes the No. 193 egg cooker with ivory base and copper dome, 4 double egg cups in hobnail crystal, poaching dish and copper service tray.

Standard package, 4.

No. 1933.each $4.95

No. 742 Hankscraft DeLuxe Egg Service Sets



Set consists of a No. 730 polished ivory porcelain egg cooker decorated with silver, 4 matched egg cups, poaching attachments and a chromium-plated service tray.

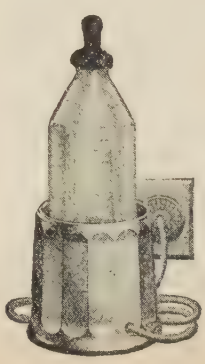
Automatic egg cooker boils, poaches, scrambles, shirrs or steam fries eggs. Has no wire coils to burn out.

Standard package, 4.

No. 742.....each $8.50

No. 673 Hankscraft Bottle Warmers

Junior Model



The No. 673 bottle warmer heats bottles to the correct feeding temperature and then automatically shuts off.

Will heat all standard sizes of bottles.

Works on 110 volts a.c.

Furnished in blue or pink.

Standard package, 4.

No. 673.....each $2.95

Marion Electric Irons

No. 111—Non-Automatic

A 6-pound fast-heating iron. Has beveled edges.

Can be used on 110 volts a.c. or d.c.

Furnished with 10000-cycle approved cord and heavy duty grip-all plug.

Wattage, 660.

Standard package, 6; shipping weight, 43 pounds.

No. **111**, Nickel Finish.....each **$3.75**
No. **111**, Chrome Finish.....each **3.95**

No. 111A—Automatic

A 6-pound iron which maintains a temperature at any selected degree; safeguards from overheating.

For use on a.c. only.

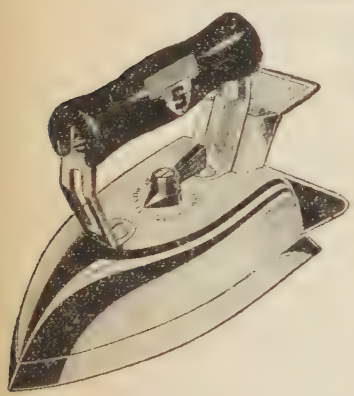
Equipped with 7-foot cord, retrieving coil, bakelite iron plug and rubber attachment plug.

Rating, 660 watts; standard voltages: 95, 110, 125, 220, 250; 60 cycles a.c. Shipping weight each 7 pounds.

No. **111A**, Chrome Finish.....each **$5.95**

No. L3 Sunbeam Ironmaster Irons

For 110 Volts A.C. Only



A full size, perfectly balanced 1000-watt automatic electric iron weighing only 3½ pounds.

Has free-acting, trouble-proof thermostat control.

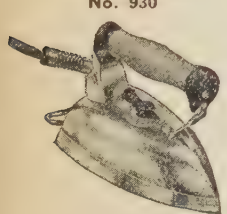
With tapered nose, pointed heel, heel rest and rosewood handle. Finished in chromium plate.

Packed in cartons of 6; shipping weight per carton, 30 pounds.

No. **L3**.....each **$6.95**

Proctor Automatic Heat-Adjusting Speed Irons

No. 930



No. 940

This iron has a temperature control dial on which is marked the names of different fabrics, so that the placing of pointer on any name gives the correct temperature for that fabric.

Switch-off gives convenience of turning off current without removing plug from wall.

The attached cord removes all plug and terminal pin trouble.

Has a strong well-balanced heel rest and a cork insulated handle, air-cooled.

No. 930 has a magic stand. By pressing the thumb lever the stand swings under the iron. It may be placed anywhere, adds no weight and is never in the way.

Over all dimensions: Length, 8¼ inches; width, 4½ inches; height, 5 inches.

No. **930**, 1000-Watt, with Cord Support.....each **$8.95**
No. **940**, 1000-Watt.....each **7.95**
No. **941**, 800-Watt.....each **5.95**

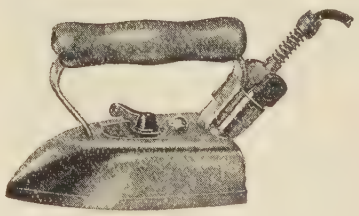
American Beauty Irons

For domestic, laundry and industrial use.

Bottom, 6½x3¾ inches. Finished in chromium plate.

In standard voltage ranges: 100–109, 110–120, 121–130, 190–209, 220–240 and 241–260.

Nos. 44-AB and 66-AB—Adjustable-Automatic For A.C. Only



Through increase of wattage and extra supply of heat units, same results can be obtained with No. 44-AB iron as with heavier irons. If work is properly dampened, extra heat supplied permits of less pressure on work. As thermostatic switch controls overheating, it is possible to use higher wattage and gain these advantages. Through the control lever thermostat can be adjusted for low heats for lighter work and for delicate fabrics.

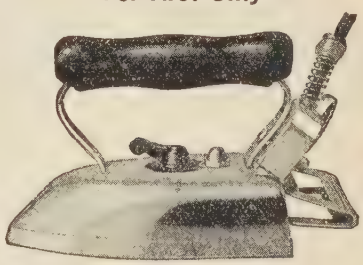
No. 66-AB in 1000-watt size has great heat capacity for heaviest work; lower heats are under perfect control.

Has separate stand, No. 880 cord set and No. 808 plug.

Packed 6 in a case; shipping weight, No. 44-AB, 43 pounds; No. 66-AB, 53 pounds.

No. **44**-AB, 1000 Watts, Weight 4½ Pounds.....each **$8.95**
No. **66**-AB, 660 or 1000 Watts, Weight 6½ Pounds.each **8.95**

Nos. 45-AB and 65-AB—Adjustable-Automatic For A.C. Only

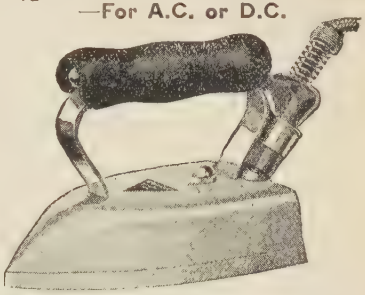


With "on" and "off" switch which is operated by control lever. By turning control lever past "low" position to "off," current is turned off; reverse operation turns on current. Has attached heel stand, readily removable. Conductor cord is permanently attached to iron; connections enclosed in metal housing. With 6½-foot cord and attachment plug cap. In other respects same as No. 66-AB.

Packed 6 in a case; shipping weight, No. 45-AB, 37 pounds; No. 65-AB, 46½ pounds.

No. **45**-AB, 1000 Watts, Weight 4½ Pounds.....each **$8.95**
No. **65**-AB, 1000 Watts, Weight 6½ Pounds.....each **8.95**

No. 6½-B and No. 3-B—Non-Automatic —For A.C. or D.C.



This iron has a cut-away nose and a comfortable handle. With heat-insulating stand and No. 830 cord set having No. 802 detachable composition plug and attachment plug.

Elements, contacts, contact sleeves, etc., of nickel-chromium and nickel-copper alloys.

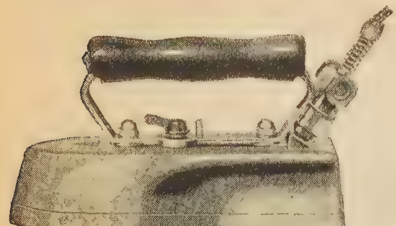
In standard voltage ranges: 100–109, 110–120, 121–130, 190–209, 219–240, and 241–260.

Packed 6 in a case; shipping weight, 52½ pounds.

No. **6½**-B, 525 Watts, Weight 6½ Pounds.....each **$7.50**
No. **3**-B, 350 Watts, Weight 3 Pounds.....each **6.75**

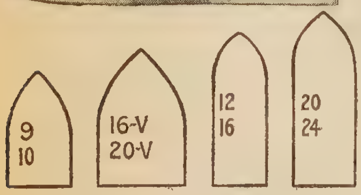
American Beauty Pressing Irons

Type AA—Adjustable-Automatic—For A.C. Only



These irons are used for all kinds of commercial and industrial work.

Temperature and heat are controlled. The use of rayon and other fabrics makes imperative the use of low temperatures. At the same time where heat requirements are heavy the automatic thermostatic control permits the use of higher temperature in heating elements and a greater supply of heat.

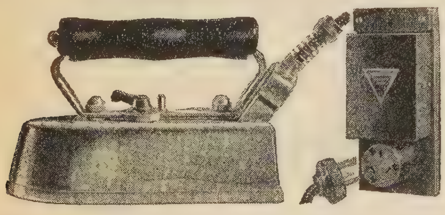


Relative Bottom Shapes

Equipped with No. 880 cord set, 6½-foot cord and No. 808 metal-sheathed plug.

Finished in chromium plate. Furnished with separate stands.

Type DC—Adjustable-Automatic—For D.C. Only



The d. c. iron has the same general performance-characteristics as the Type AA iron.

With separate automatic relay switch which turns on and off the main current supply; switch action controlled by thermostatic switch within iron. Connecting cord (3-conductor) is connected to 3 terminals on iron (protected by metal housing) and has 3-point terminal attachment plug that is plugged into receptacle on relay switch base. Current may be turned "on" or "off" at the iron. Adjustable control lever when swung past "low" position turns off current; reverse action, "on." With 8-foot cord.

Relay switch should be fastened to wall or support in vertical position; will not operate properly lying down.

For A.C. Only Cat. No.	Each	For D.C. Only Cat. No.	Each	Size of Bottom Inches	Watts	Wt., Lbs. Net	Ship.
9–AA	**$12.50**	9–DC	**$16.00**	7$\frac{3}{16}$x4¼	1000	9	11¼
10–AA	**14.00**	10–DC	**18.00**	7¾x5	1000	10	12¾
12–AA	**20.00**	12–DC	**23.00**	9⅝x3$\frac{5}{16}$	1000	12	16
16–AA	**21.00**	16–DC	**25.00**	9⅝x3$\frac{5}{16}$	1000	16	20
20–AA	**23.00**	20–DC	**27.00**	11 x3¾	1000	20	25
24–AA	**27.00**	24–DC	**30.00**	11 x3¾	1000	24	30
16–VAA	**26.00**	16–VDC	**29.00**	8½x5⅝	1000	16	25
20–VAA	**27.00**	20–VDC	**30.00**	8½x5⅝	1000	20	28

Types AA and DC voltage ranges: 100–109, 110–120, 121–130, 190–209, 220–240 and 241–260.

Type B—Non-Automatic—For A.C. or D.C.

Cat. No.	Each	Size of Bottom Inches	Watts	Weight Pounds Net	Ship.
9–B	**$11.00**	7$\frac{3}{16}$x4¼	675	9	11¼
10–B	**12.50**	7¾x5	675	10	12¾
12–B	**16.00**	9⅝x3$\frac{5}{16}$	650	12	16
16–B	**17.00**	9⅝x3$\frac{5}{16}$	650	16	20
20–B	**19.00**	11 x3¾	750	20	25
20–HB	**20.00**	11 x3¾	1000	20	25
24–HB	**23.00**	11 x3¾	1000	24	30
16-VB	**22.00**	8½x5⅝	1100	16	25
20–VB	**23.00**	8½x5⅝	1100	20	28

Type B voltage ranges: 100–109, 110–120, 121–130, 190–209, 220–240 and 241–260.

No. 100 Arvin Standard Fan-Forced Electric Heaters

This heater heats the air and circulates it. Has induction type fan. Air intake is through louvres in back.

This heater has a black enamel grille and handle.

The cabinet is of heavy gauge steel with attractive and permanent green morocco finish.

Operates on 110–125 volts, 60 cycles a.c. Uses 9½ amperes at 110 volts.

Size at base, 9½x5 inches. Height, 11 inches.

Packed 6 to a case.

Shipping weight, 7 pounds.

No. 100..each **$5.95**

No. 200 Arvin DeLuxe Fan-Forced Electric Heaters

This heater heats the air and circulates it. Has induction type fan. Air intake is through louvres in back.

With heavy gauge steel cabinet; green morocco finish. Completely enclosed bottom; convenient switch in front. With rubber feet.

Operates on 110 or 125 volts a.c. 60 cycles; also on 110 volts 25 cycles. Uses 9½ amperes at 110 volts.

Size at base, 10x5½ inches. Height, 13 inches.

Packed 6 to a case.

Shipping weight, 9 pounds.

No. 200..........each **$7.95**

No. 1200 M-B Fan Type Auxiliary Heaters

110-125 Volts, 1000 Watts

A small quietly-operating electric fan located directly in back of the suspended heating element throws a clean steady flow of heat almost instantly to all parts of a room.

The circular heat outlets in front and back are guarded by wire grills and the brown wood handle at top makes the heater easily portable.

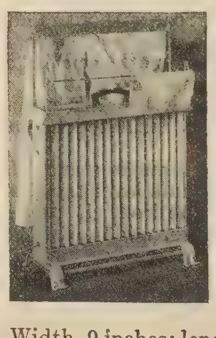
Metal case is finished in beige enamel; base and outline of case are dark brown.

Overall height, 14 inches.

Standard package, 3. Shipping weight, each, 6½ pounds.

No. 1200..each **$8.45**

No. 1110 Proctor Electric Radiators and Dryers



Convector Type

Serves as a quick dryer for small articles; equipped with telescoping rustproof racks.

Exposed surfaces kept at a maximum of 200° F. Made of heavy terne plate sheet metal; rust-resisting.

Separate circuit switches control two 660-watt elements; also with two 750-watt elements. For 110–120 volts a.c. or d.c.

Statuary bronze, pastel green or old ivory lacquer finish.

With 8-foot cord and plug.

Width, 9 inches; length, 21 inches; height, 23 inches.

No. 1110, Shipping Weight 24 Pounds..........each **$15.00**

Hewitt Electric Heating Pads

The flexible woven elements used in this pad free it from all feeling of ridges and stiff wires.

Each of the two woven elements in the pad covers its entire area, giving an even heat distribution at all times.

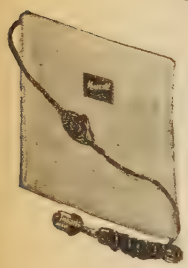
Ready to use in 2 or 3 minutes after being turned on.

Non-radio-interfering precision thermostats and low temperature heating elements insure an increased factor of safety in use.

Size, 12x15 inches. Wattage, 60; voltage, 110–125.

Each pad is wrapped in cellophane.

No. 46—6 Heats—Wetproof



This pad has an outer cover of fine grade eiderdown—under this an inner covering made of a new permanently wetproofed fabric which permits the pad to be used for hot wet packs, etc., and also prevents damage through accidental wetting.

The label side always runs about 15° hotter than the reverse side, thus the user has the choice of 6 temperatures (two on each setting of the control switch).

Made in peach or lavender.

No. **46**.....each **$6.50**

No. 44S—3 Heats—Wetproof

A popular new model of a newly developed fabric with a soft and woolly outside and a permanently wetproofed inner surface.

The cover is snap fastened and is removable and washable.

Made in blue only.

No. **44S**.....each **$4.45**

No. 44—3 Heats

A full-sized eiderdown pad with interior construction, thermostats, etc., identical to that of the No. 44S pad, but without the wetproof feature.

Made in brown only.

No. **44**.....each **$3.95**

Hewitt Electric Heating Blankets

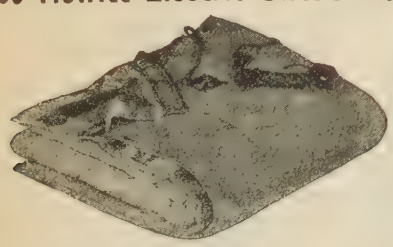
The warmth of this blanket is distributed evenly, leaving only a small unheated margin at sides and ends to permit tucking in.

Ten-foot cord has convenient on and off switch. Thermostats of low temperature setting are a positive protection against overheating, should blanket be folded up and covered over.

No. **173**, 3 Heats, 120 Watts, 60x80 Inches.....each **$17.50**

No. **183**, DeLuxe Model, 3 Heats, 120 Watts, 66x80 Inches, All wool.....each **55.00**

No. 190 Hewitt Electric Sweat Blankets



This multiple heat wool blanket has a heating capacity to induce copious perspiration. It is intended for use in hospitals, electro-therapy studios or in the home under the direction of a physician or skilled attendant.

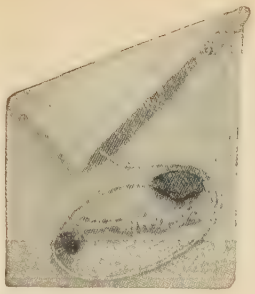
Rheostat heat control from mild to very hot. A rubber sheet is provided to protect blankets from moisture.

Size, 66x80 inches. Wattage, 220; voltage, 100–125.

No. **190**.....each **$85.00**

No. 685 M-B Electric Heating Pads

110-125 Volts, 50 Watts



An outstanding feature of these pads is the sanitary washable velour cover. Simply slide back the zipper fastener, remove the unit, and wash the cover.

Furnished in three pastel shades: orchid, peach and apple green.

Full size, 12x15 inches.

A non-radio interfering unit.

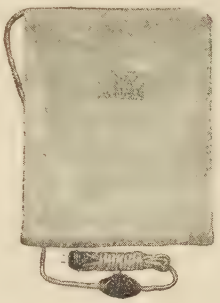
With three heats (low, medium and high). Equipped with harmonizing 10-foot cord and pull plug.

Standard package, 3. Shipping weight, each, 2 pounds.

No. **685/2**, Apple Green Cover.....each **$6.95**
No. **685/4**, Orchid Cover.....each **6.95**
No. **685/5**, Peach Cover.....each **6.95**

No. 686 M-B Electric Heating Pads

110-125 Volts, 50 Watts



A permanently covered heating pad which meets the demand for a low-priced yet thoroughly dependable and guaranteed pad.

The eiderdown cover is light blue with a decorative white dot motif.

Full size, 12x15 inches.

With three heats (low, medium and high).

Equipped with 10-foot cord.

Standard package, 3. Shipping weight each, 2 pounds.

No. **686**.....each **$3.95**

H-B Vibrator Applicators

H-B Applicators have been found to be the most practical to fill every need of every case where vibration is advisable. Each is fitted with a little threaded stem, which may be readily screwed into the end of the shaft and quickly taken off and changed when desired.

The first six applicators are included with every H-B Vibrator. Nos. 8, 9, and 10 are special, and may be had for the prices given below.

Cat. No.	Description	Price Each
1	Flat Disc made of Hard Rubber for Rubbing and Kneading the Muscles of the Body	$.50
2	Soft Rubber, Bell-Shaped Applicator, for Face, Neck, Arms and Bust	.50
3	Velvet Sponge for the Face, Especially Adapted to the Treatment of Eyes, Nose and Throat	.75
4	Round Ball made of Hard Rubber, the most Powerful Applicator made for Cases Requiring Vigorous Treatment	.50
6	Soft Rubber. A Favorite for Treating Skin and Scalp	.50
7	Soft Rubber, 12-prong, similar to No. 6, except it has fewer Prongs	.50
8	Bristle Brush. Wonderfully Effective for Scalp Treatment	1.00
9	Soft Rubber Rectal Applicator	1.50
10	Soft Rubber, similar to No. 2 but Larger	.50

Type A Hamilton Beach Vibrators

For home use. Consists of 1 vibrator, with cord and attachment plug for connecting to electric light fixture, and 6 applicators, all packed in a fibre-board fitted carrying case. The motor has a speed regulating switch.

The following applicators are furnished: Nos. 1 and 4 hard rubber for body; No. 2 soft rubber for face; No. 3 velvet sponge for face; No. 6 soft rubber for head; and No. 7 soft rubber with 12 prongs. Revised edition, "Health and How to Get It," furnished free.

Type A Complete.....each **$16.50**

Type C Hamilton Beach Vibrators

Used by physicians, nurses and masseurs. Of heavier construction and has a more powerful motor than the vibrator for home use. For cases requiring energetic treatment. Packed in a black leatherette case, plush lined.

Following applicators are furnished with machine: Nos. 1 and 4 hard rubber for body; No. 2 soft rubber for face; No. 3 velvet sponge for face; No. 6 soft rubber for head; and No. 7 soft rubber with 12 prongs. Revised edition, library bound book, "Health and How to Get It" furnished free with vibrator.

Type C Complete.....each **$19.25**

Type D Hamilton Beach Vibrators

For family use and for the professional hair dresser and masseur who calls on patrons at their homes. Has no speed regulator. Instantly stopped or started by button in handle. Motor is universal and operates on either a.c. or d.c. Following applicators furnished with machine: Nos. 1 and 4 hard rubber for body; No. 2 soft rubber for face; No. 3 velvet sponge for face; No. 6 soft rubber for head; and No. 7 soft rubber with 12 prongs. Revised edition, library bound book, "Health and How to Get It" furnished free with vibrator.

Type D Complete.....each **$13.50**

Type F Hamilton Beach Vibrators

Provided with a speed controlling device. It gives both the rubbing and percussion strokes and is guaranteed against electrical and mechanical defects. Packed in fibre board fitted carrying case.

Following applicators furnished with this machine: Nos. 1 and 4 hard rubber for body; No. 2 soft rubber for the face; No. 3 velvet sponge for face; No. 6 soft rubber for the head; and No. 7 soft rubber with 12 prongs. Revised edition, library bound book, "Health and How to Get It" furnished free with vibrator.

Type F Complete.....each **$13.50**

Klenzairs

Circulates, purifies and refreshes 6000 cubic feet of air an hour. A gallon or so of water is used in the machine. Water is taken to four monel metal discs revolving at high speed. Spray dashes off edges of discs. Temperature of water is reduced, air is cooled and partially de-humidified in hot weather; in winter, humidification takes place.

Has rust-resisting steel body; chromium-plated hardware. Upper structure, vitreous porcelain enamel, grain walnut finish; lower structure, walnut tone lacquer finish.

Has 10-foot cord with standard plug; 60-cycle, a.c. or d.c., standard type, fractional h.p. motor; standard 2-speed "on" and "off" toggle switch.

No. 700

No. 700, Floor Model

Height, 40 inches. Shipped knocked down.
No. 700, Ship. Wt., 35 Lbs....ea. **$25.00**

No. 710, Wall Bracket Model

Adjustable as to direction of draft.
No. 710, Ship. Wt., 25 Lbs....ea. **$25.00**

No. 720, Desk Model

Height, 15 inches; width of base, 17¼ inches; depth of base, 11 inches.
No. 720, Ship. Wt., 44 Lbs....ea. **$32.50**

No. 725, Hay Fever Attachment

Fits No. 700 only. Consists of fabric tunnel with felt air filter and adjustable metal window shield.
No. 725.....each **$10.00**

No. B-182B Gilbert Standard Automatic Electric Humidifiers

Humidifies 7500 cubic feet of air.

An inverted revolving cone submerged in water draws water onto disc above it, which, also revolving and synchronizing with cone, throws water outward by centrifugal force against shutter-like vanes by which it is broken up into tiny particles that are propelled by disc and rising are absorbed by atmosphere.

With metal pedestal and copper container. Finished in green.

A.c. or d.c. 110-volt motor. Height, 37½ inches. Weight, 25½ pounds.

No. B-182B, Capacity, 1 Gallon..each **$32.50**

No. B-185 Gilbert DeLuxe Automatic Electric Humidifiers

Humidifies 7500 cubic feet of air.

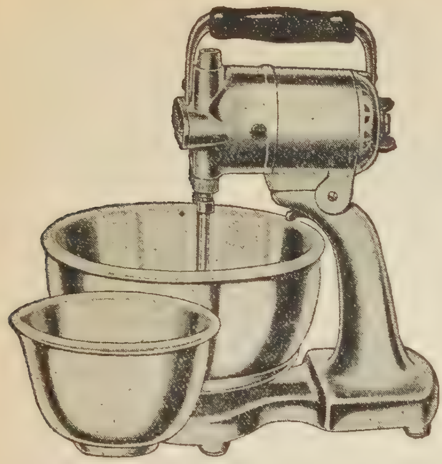
An inverted revolving cone submerged in water draws water onto disc above it, which, also revolving and synchronizing with cone, throws water outward by centrifugal force against shutter-like vanes by which it is broken up into tiny particles that are propelled by disc and rising are absorbed by atmosphere.

With metal pedestal, Fleuron Art Pottery container; humidity control automatically measures moisture content of room at all times and switches humidifier on and off. Light green finish.

A.c. or d.c. 110-volt motor. Height, 37¾ inches. Weight 35¾ pounds.

No. B-185, Capacity 1 Gallon.....each **$49.50**

Mixmasters



For mashing, juicing, beating, whipping, stirring and blending. Enclosed motor tilts back; bowls are easily removed. Bowls revolve on ball-bearing platform. Base and upright is one die-cast unit; handle turns down on side, out of the way of juicer attachment.

Ivory enamel and chrome finish; jade green bowls.

Model D, with Beaters and 2 Bowls, ... each **$18.25**

Model K, with Beaters, Bowls, Juice Extractor and Strainer, Automatic Mayonnaise Oil-Dropper as Shown .... each **$21.00**

Attachments

Food Chopper

Chops vegetables; grinds meat. With power transfer unit. Each...... **$6.25**

Power Unit Only..ea. **2.50**

Can Opener

Turns can, opens it and holds it until removed. Uses same power unit as chopper. Without Power Unit..ea. **$2.00**

Drink Mixer

Operates at same high speed as commercial mixers. No power unit required. With Mixing Glass.ea. **$2.25**

Slicer-Shredder

For vegetables and fruit. No power unit required. Each.. **$5.00**

Grater Disc ....each **1.00**

Potato Peeler

Removes only surface skin.

No power unit required.

Each...... **$4.50**

Freezer

No power unit required.

Each...... **$3.50**

Coffee Grinder

Grinds coffee coarse, medium or fine.

Uses same power unit as chopper.

Each...... **$2.50**

Knife Sharpener

Puts smooth edge on knife and scissor blades. Uses same power unit as chopper. Without Power Unit..ea. **$2.25**

Polisher-Buffer

For metal surfaces. No power unit required. With Sunbeam Polishing Compound ....each **$.75**

Model B Hamilton Beach Food Mixers

For all mixing, beating, whipping and mashing. Has plenty of power for cakes, icings, salad dressings, etc.

Has self-revolving bowls with control that regulates speed at which bowls turn. Motor may be lifted from stand and used for mixing over the stove in a double boiler or any pan. Motor tips back so beaters drain into bowl. Beaters are easily removed for cleaning. Has single agitator for mixing malted milk in a glass.

Furnished with two opaque glass ivory bowls; small bowl holds one quart, large bowl holds three quarts. With 6-foot rubber cord. Has three speeds. The Hamilton Beach motor operates on a.c. or d.c., 105–120 volts, 25 to 60 cycles; worm gear drive.

Height, 13 inches. Length of base, 12½ inches; width of base, 7 inches.

Ivory and black baked enamel finish; cast iron base has rubber feet; chromium-plated steel beaters.

Packed one in a carton. Shipping weight, 19 pounds.

Model B .... each **$18.75**

Attachments

Juice Extractor Attachment

Extracts juice from oranges, lemons and small grapefruit. Sanitary; no metal parts connected to bowls; may be washed. Has ball thrust bearings. With removable strainer, Beetleware reamer, ivory bowl of opaque glass, and removable spout to guide juice into glass.

Packed one in a carton. Shipping weight, 4 pounds.

Each **$2.75**

Potato Peeler Attachment

Removes peel by the abrasion method.

Operation: Fill top container with water. Place 8 to 10 potatoes in peeling container. Run motor about 2 minutes or until water container is empty. Potatoes will then be peeled.

Height, 11¾ inches; diameter, 9⅞ inches. Made of galvanized steel, ivory enamel finish. Abrasion liner and revolving disc lift out for easy cleaning.

Packed one in a carton. Shipping weight, 12 pounds.

Each **$8.00**

Coffee Grinder Attachment

Sets on motor where extractor lifts off. No power unit is needed. Top glass jar holds one pound. Adjustable; grinds coarse for boiling, medium for percolating and very fine for vacuum or drip coffee makers.

Packed one in a carton. Shipping weight, 5¼ pounds.

Each **$3.00**

Slicer and Shredder Attachment

Cannot be used without power unit. Slicer cone with 6 knives revolves in housing and quickly slices potatoes, beets, turnips, cucumbers, apples and other fruits or vegetables. Slicer cone is easily replaced by shredder cone. Shreds practically all vegetables and fruits.

Packed one in a carton. Shipping weight, 2¾ pounds.

Attachment without Power Unit .... each **$3.50**

Meat Grinder and Chopper Attachment

For grinding meat, chopping vegetables, fruits and nuts and for crumbing bread or crackers. Cannot be used without power unit. Has inside cutter for grinding meat without crushing it; also has coarse plate and two cutters for chopping vegetables. Furnished with wooden stomper.

Packed one in a carton. Shipping weight, 4¼ pounds.

Each **$3.00**

Power Unit

For use with meat grinder and slicer-shredder attachment. Power unit is not connected to mixer, instead, motor is taken to power unit. Power unit stands on its own rigid base. Ball-bearing construction; drive attachments about 40 r.p.m.

Packed one in a carton. Shipping weight, 6½ pounds.

Each **$4.50**

Hamilton Beach Hair Dryers

115 Volts, A.C. or D.C.

Ideal for professional use in barber shops and beauty parlors, or for hard service in a large family.

Handy in a drafting room for quick-drying blue prints, in photograph galleries for all drying, and for medical heat treatment.

The case is of finest solid aluminum, triple-buffed and polished.

The convenient button in the handle controls the motor, as well as the cold and hot blasts, which are evenly distributed, by the improved high velocity muzzle.

Fan is fully enclosed.

Weight, packed, 5 pounds.

No. 2 ....each **$16.50**

No. 3 Hamilton Beach Hair Dryers

110-120 Volts, A.C. or D.C.

Light, simple and powerful. Can be held in the hand or set in the stand at any desired angle, leaving hands free for scalp massage while hair is drying. Adjustment is instantaneous and automatic. Stays where it is put and stand is quickly detachable. Finished in ivory, old rose, orchid or robin's egg blue.

Fan is fully enclosed. Dries the heaviest head of hair in a few minutes.

Gives hot or cold blast by simply touching the switch.

No. 3, Without Stand..........................each **$12.75**
No. 3, With Stand..............................each **14.00**

No. 5 Hamilton Beach Hair Dryers

This dryer gives warm or cool blasts of air. Has a quiet, compact Hamilton Beach motor.

Ivory enamel finish. Gray silk cord.

Approximate shipping weight, 4 pounds.

No. 5...............................each **$7.95**

No. B-92 Gilbert Hair Dryers

110 Volts A.C. or D.C.

Designed for home use, for drying hair, shoes, delicate fabrics, etc.

This is a motor-driven blower type dryer; throws hot air only. Operates on 110 volts a.c. or d.c. 60 cycles or less.

Has ivory colored handle; finished in ivory.

Equipped with toggle switch, green cord and plug cap.

Weight each, 2¾ pounds; carton of 6 weighs 18 pounds.

No. B-92........each **$5.95**

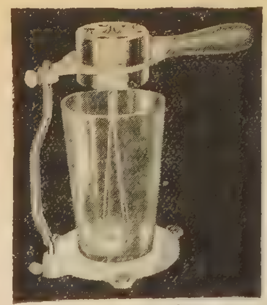
No. S2 Electric Scissors

A fast, easy way to cut all kinds of cloth and fabrics.

Simple, compact and easily handled.

No. S2............each **$6.50**

No. 1 Gilbert Electric Mixers



A portable type mixer for mixing drinks, whipping cream, beating eggs and other light mixtures.

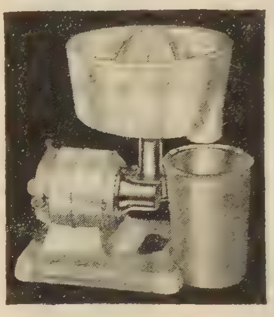
With 110-volt induction motor; operates on a.c. 60 cycles only. Encased in chromium-plated shell.

Detachable agitators are nickel-plated heavy gauge steel wire securely fastened to motor spindle. With metal base and rubber feet. Curved nickel-plated upright rod with extension supporting arm for motor. Adjustable at top and bottom for varying heights. Has large glass mixing receptacle.

Finished in chromium, blue and gray. Size, 5¾x8⅞ in. Wt. each, 4 lbs. Packed 6 to a carton; wt., 38 lbs.

No. 1.......................................each **$2.95**

No. B-124 Sunkist Juniorette Apartment Size Juice Extractors



A compact, attractive juice extractor with useful glass and strainer.

Has toggle switch.

Operates on 110 volts, 60 cycles or less, a.c. or d.c.

Finished in ivory and nickel.

Height over all, 7½ inches; width over all, 7 inches.

Weight, 5 pounds.

Packed 6 in a carton; weight, 42 pounds.

No. B-124.....................................each **$6.95**

No. B-123 Gilbert Sunkist Junior Electric Fruit Juice Extractors

For home use. Quickly and efficiently extracts juice from oranges and lemons, leaving only the membranous tissue and the rind.

Universal motor operates on 110 volts, 60 cycles or less, a.c. or d.c. Motor protected from moisture.

With chromium-plated body, black base, removable bowl and reaming bulb, ivory.

Bowl 6¼ inches in diameter, 2⅞ inches deep. Metal base with rubber feet. Toggle switch, standard cord with plug cap.

Height over all, 10 inches; width, 7 inches.

Packed 6 in a carton; weight, 64 pounds.

No. B-123.....................................each **$12.50**

No. B-87 Gilbert Vibrators

110 Volts A.C. or D.C.

A universal motor vibrator that operates on 110 volts a.c. or d.c., 60 cycles or less. Complete with 3 applicators—brush, button and cup. Circular vibration. Automatic oiling system. Used on either a.c. or d.c. socket rotator, spring friction relief. Two part drawn steel shell and ivory colored wood handle, finished in ivory. Has toggle switch and green cord with plug cap.

Length of handle, 4⅜ inches; length over all, handle and motor, 7 inches. Weight each, 2¼ pounds.

Packed 1 dozen to a carton; weight, 30 pounds.

No. B-87.......................................each **$5.50**

Warren Telechron Self-Starting Electric Clocks

Huntington Model

A low-priced tambour model clock.

Has mahogany case with Spanish high-lighted finish and relief ornaments. Ivory enamel dial, 4½ inches.

Height, 7³⁄₁₆ inches; width, 17¼ inches; depth, 3⁷⁄₁₆ inches.

No. **563**....................each **$8.95**

Bullfinch Model

A half size banjo wall model clock. Has mahogany case with colored glass panels. Early American clipper-ship scene.

Enameled dial, 3½ inches.

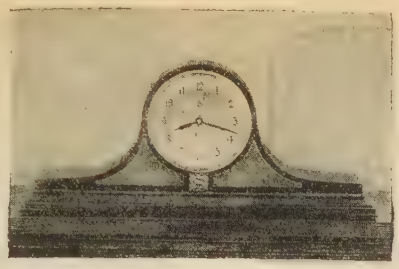
Height, 20¼ inches.

No. **694**....................each **$17.50**

Consort Model

A wall model clock for kitchens and bathrooms. Has chrome plated brass case with Beetle moulded bezel in green, ivory, white, black, blue and red. Size across, 5¾ inches.

No. **2FO1**....................each **$4.95**



Maynard Model

Has mahogany case with Spanish high-lighted finish; lacewood panels in front. Gold finished, etched dial, 4½ inches.

Height, 7³⁄₁₆ inches; width, 17¼ inches; depth, 3⅞ inches.

No. **4FO1**....................each **$9.95**

Auxiliary Movement Household Clocks

The Telechron auxiliary movement is a simple mechanism which maintains correct time when electric current is interrupted. Should a current interruption occur, it immediately starts to work, and continues to operate for a period of about two hours—should an interruption last that long.

This movement automatically starts, stops and winds itself. Equipped with Telechron self-starting motors.

Renault Model—Directoire Style

Has mahogany case, Spanish high-lighted, lacquer finish with inlaid border. Dial, 3½ inches.

Height, 6 inches; width, 4⅞ inches; depth, 3⅜ inches.

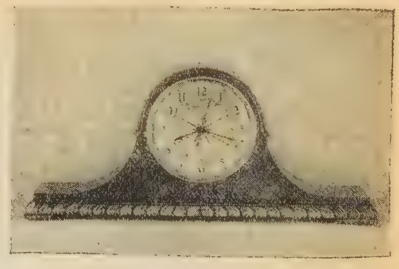
No. **3A51**....................each **$16.00**

Bishop Model—Sheraton Style

Has mahogany case, Spanish high-lighted, lacquer finish with inlaid border and carved overlay ornaments. Dial, 4½ inches.

Height, 6⅞ inches; width, 17 inches; depth, 3¾ inches.

No. **4AO1**....................each **$20.00**



Norwood Model

A large tambour model clock.

Mahogany case has Spanish high-lighted finish and carved base. Gold finished, etched dial, 5½ inches.

Height, 8¹¹⁄₁₆ inches; width, 20 inches; depth, 5 inches.

No. **5FO1**....................each **$15.00**

Commercial Clocks

Telechron commercial clocks need only be plugged into a regulated a.c. electric outlet and accurate dependable time is assured. Costs only a few cents a month to operate.

With sweep-second hand on 8, 10, 12 and 15-inch dials.

Square Wood Case

Oak or Mahogany Finish

No.	Oak Each	*Mahogany Each	Case Size In.	Diam. Dial In.
908	**$17.00**	**$18.00**	10¾	8
910	**19.00**	**20.00**	13	10
912	**20.00**	**21.00**	15½	12
915	**27.00**	**28.00**	19	15
918	**42.00**	**46.00**	23	18
924	**85.00**	**90.00**	30	24

*Spanish high-lighted finish.

Round Metal Case

Statuary Bronze Finish

No.	Each	Case Size In.	Diameter Dial In.
108	**$15.00**	12	8
110	**16.00**	14	10
112	**17.00**	16¾	12
115	**24.00**	19¾	15
118	**40.00**	24	18
124	**85.00**	30¾	24

Warren Telechron Self-Starting Electric Clocks

Telebell Alarm Clock

With Butler-finish metal case; polished moulded plastic base. Ivory enamel finish dial, $3\frac{1}{2}$ inches.

Height, $4\frac{3}{4}$ inches; width, $4\frac{1}{2}$ inches; depth, 3 inches.

No. **7F53A**, Gold Color Case; Black or Ivory Base....each **$5.95**

No. **7F53B**, Chrome Case; Green, Black or Red Base...each **5.95**

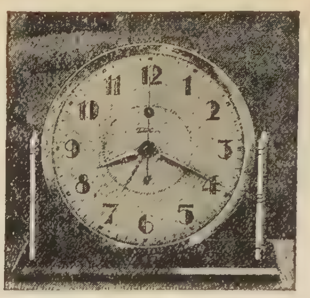
Telalarm Alarm Clock

Dial can be clearly illuminated through diffusing glass by means of a tiny Mazda lamp.

Dura-alloy (silver color) case, non-tarnishing finish Moulded, black base.

Height, 5 inches; width, $4\frac{1}{4}$ inches; depth, 3 inches.

No. **711**.........each **$9.95**



Signalette Alarm Clock

The unusual visibility of this clock ($4\frac{1}{2}$-inch dial) is immediately discernible.

Gold or chrome finish metal frame; glossy black plastic base.

Height, $5\frac{1}{2}$ inches; width, $6\frac{1}{2}$ inches; depth, 3 inches.

No. **7F55A**, Gold Finish............each **$9.95**

No. **7F55B**, Chrome Finish.........each **9.95**

Autolarm Alarm Clock

Has an illuminated dial. With 24-hour, automatic alarm feature.

Moulded walnut color Heppel white style case with gold finished handle and feet.

Height, $6\frac{1}{8}$ inches; width, $4\frac{3}{4}$ inches; depth, $3\frac{1}{2}$ inches.

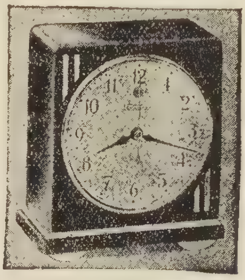
No. **7BO1**......each **$12.50**

Daphne Model

Moulded Catalin (natural puffed finish) case in green, ivory, black, red or rose quartz.

Height, $3\frac{5}{8}$ inches; width, $4\frac{3}{16}$ inches; depth, $2\frac{3}{16}$ inches.

No. **3F53**........each **$4.50**

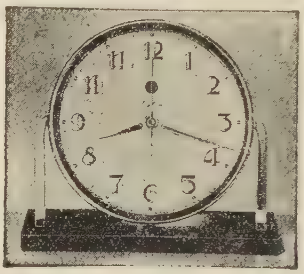


Duke Model

Black moulded plastic case with gold-plated bezel, base outline and feet.

Height, $4\frac{3}{8}$ inches; width, 4 inches; depth, $2\frac{1}{4}$ inches.

No. **3F51**........each **$4.50**



Telart Model

Gold or chrome finished metal frame; glossy black plastic base. Dial, $4\frac{1}{2}$ inches.

Height, $5\frac{1}{2}$ inches; width, $6\frac{1}{4}$ inches; depth, 3 inches.

No. **4F51A**, Gold.each **$5.95**

No. **4F51B**, Chrome Finish.........each **5.95**

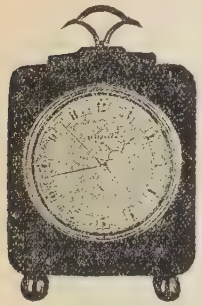
Newberry Model

Polished lacquer finish case with relief ornament.

Height, $6\frac{1}{2}$ inches; width, 6 inches; depth, $2\frac{3}{4}$ inches.

No. **3F55M**, Mahogany Case......each **$5.95**

No. **3F55MP**, Maple Case..........each **5.95**



Diana Model

With translucent illuminated dial. Rheostat can regulate intensity of light.

Beetle black case; chrome finished metal feet and handle.

Height, $7\frac{1}{2}$ inches; width, $4\frac{5}{8}$ inches; depth, $3\frac{5}{16}$ inches.

No. **358**.........each **$9.95**

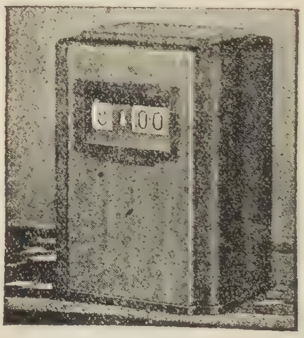
Shelburne Model

Has mahogany case with Spanish high-lighted finish; lacewood panels.

Gold finished etched dial, $4\frac{1}{2}$ inches.

Height, 9 inches; width, 7 inches; depth, $4\frac{1}{2}$ inches.

No. **532**.........each **$9.95**



Minitman Model

Brown mahogany case; matched satinwood ornamental front and top panels; statuary bronze escutcheon plate. Three drum type dials indicate hours and minutes.

Height, $6\frac{1}{8}$ inches; width, $4\frac{3}{8}$ inches; depth, $3\frac{11}{16}$ inches.

No. **8BO3**.......each **$9.95**

Minitmaster Model

Time is indicated bv numerals; seconds "pass in review" on a revolving disc. Has illuminated face.

Black plastic case; gold finished metal ornaments; etched design on crystal.

Height, $6\frac{5}{16}$ inches; width, $4\frac{3}{16}$ inches; depth, $3\frac{11}{16}$ inches.

No. **8BO1**......each **$10.95**

Revere Chiming Clocks

Telechron Motored Self-Starting Synchronous Movement

Westminster Chimes

Westminster chimes on all quarters on deep, resonant, silver-toned rods, with harmonious chord hour strike.

Chimes can be silenced.

No. R-642 ..... **each $50.00**

Honduras mahogany, lacquer finish; bird's-eye maple overlay. Metal feet, handle and corner ornaments.

Height, 12 inches; width, 8½ inches; depth, 5 inches.

Dial, 5 inches. Raised numerals.

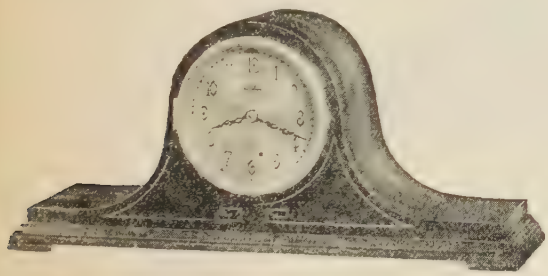
No. R-820 ..... **each $30.00**

Honduras mahogany, lacquer finish.

Height, 11⅜ inches.

Width, 7½ inches.

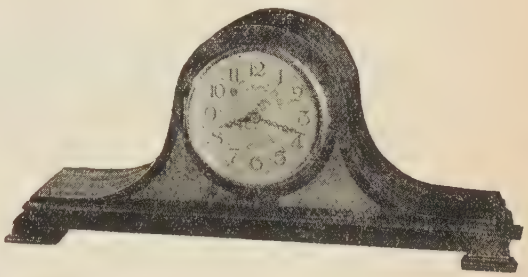
Depth, 5⅞ inches.



No. R-802 ..... **each $35.00**

Honduras mahogany, inlaid lines; lacquer finish.

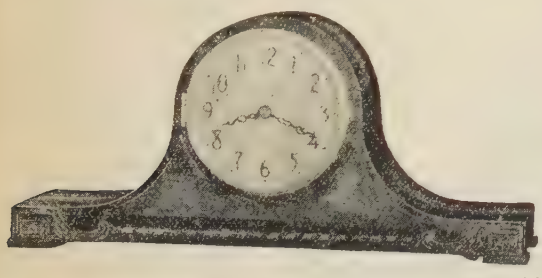
Height, 7⅞ inches; width, 18⅛ inches; depth, 5⅛ inches.



No. R-603 ..... **each $37.00**

Honduras mahogany, lacquer finish; bird's-eye maple overlay.

Height, 9 inches; width, 21 inches; depth, 6 inches; dial, 5 inches.

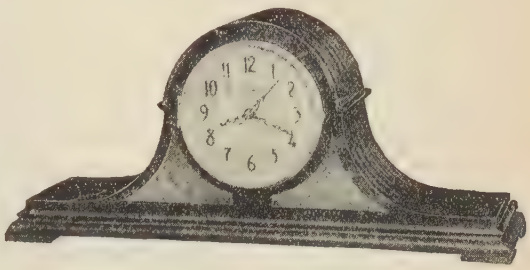


No. R-822 ..... **each $40.00**

Honduras mahogany, lacquer finish; burl overlay.

Height, 7¾ inches; width, 17⅛ inches; depth, 4⅞ inches.

Raised numerals.



No. R-608 ..... **each $42.50**

Honduras mahogany, lacquer finish; bird's-eye maple overlay.

Height, 9 inches; width, 20½ inches; depth, 6 inches.

Dial, 5 inches. Raised numerals.

Revere Chiming Clocks

Telechron Motored—Self-Starting Synchronous Movement

Westminster Chimes

Westminster chimes at all quarters on deep, resonant, silver-toned rods, with harmonious chord hour strike. Chimes can be silenced.

Floor model clocks are made in various models only two of which are shown. Special bulletins on other models gladly furnished on application.

Vivienne Model Grandmother Clock

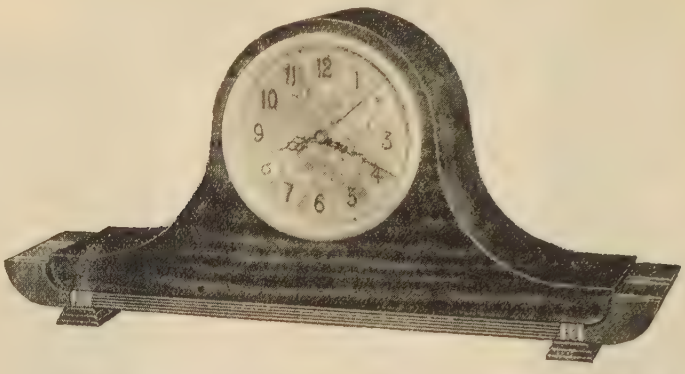
Early American style.

Honduras mahogany; lacquer finish.

Height, 73 inches; width, 13 inches; depth, 8 inches.

Silver dial. Westminster chimes.

Each.....**$110.00**

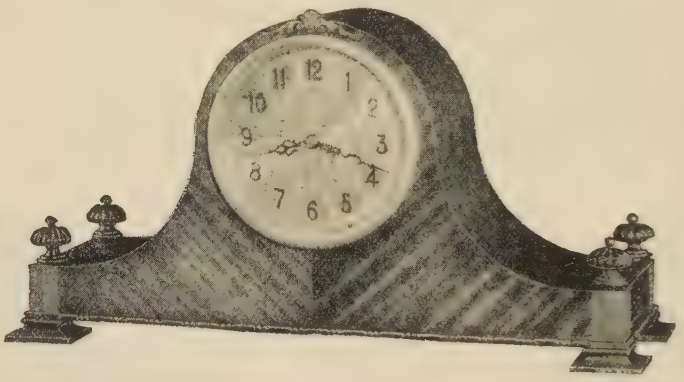


No. R-444.....**each $55.00**

Honduras mahogany, lacquer finish; clear maple end. Cast metal decorations.

Height, 10¾ inches; width, 22½ inches; depth, 6 inches.

Six-inch gold dial. Raised numerals.



No. R-442.....**each $70.00**

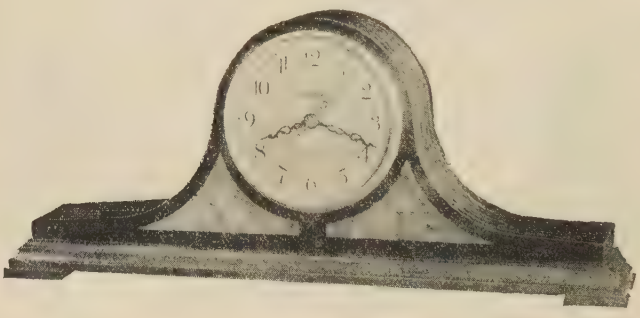
Honduras mahogany, lacquer finish; matched grain mahogany front. Hand carved decorations.

Height, 11 inches; width, 21 inches; depth, 7¼ inches.

Gold dial six-inch. Raised numerals.

Hour and Half-Hour Strike

Strikes on hour and half hour on rich tone spiral silver-toned rod.



No. R-932.....**each $21.50**

Honduras mahogany, lacquer finish bird's-eye maple overlay.

Height, 7⅜ inches; width, 17¼ inches; depth, 4⅛ inches.

Roxbury Model

Colonial style.

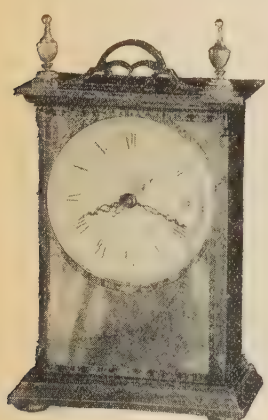
Honduras mahogany, lacquer finish; burl panels, gold dial.

Height, 72½ inches; width 17¼ inches; depth, 12 inches.

3 Chimes on 9 Tubular Bells, Movement A. ea. **$340.00**

2 Chimes on 7 Tubular Bells, Movement B. ea. **$300.00**

1 Chime on 5 Tubular Bells, Movement C. ea. **$270.00**



No. R-934.....**each $27.00**

Honduras mahogany, lacquer finish; crotch mahogany panels.

Height, 11¾ inches; width 7⅛ inches; depth, 4¼ inches.

No. R-930.....**each $21.50**

Oak or mahogany; raked grain, dove color finish.

Height, 9¼ inches; width, 6¾ inches; depth, 4 inches.

INDEX

A — Page

A-Type Fixtures, Graybar 536
Absorbers, Shock, Thompson 587
Accessories, Inter-Phone, Graybar 652
Lighting, Graybar 545
Acco Switches, Meter Service 456
Acorn Plugs, Appliance 416
Receptacles, Flush 399
Sockets, Fixture 378
Taps, Current 410
Acorns, Chain, Socket, Hubbell 379
Adapters, Condulet, Type OHN 311
Edison Base, Hubbell 411
Ediswan to Spartan, Bryant 369
Medium to Intermediate, Bryant 371
Plug, Hubbell 405
Receptacle, Polarized, Hubbell 411
Spartan to Edison 392
Street Lighting, G-E 135
Thimble, Peirce 40
Threadless, Type UCT 365
Aerial Cable, Habirshaw 228
Cable Blocks 83
Cable Booster Hooks 83
Cable C Hooks 83
Cable Cars 83
Cable Guides 83
Cable Guides and Straighteners 83
Cable Jacks, Simplex 73
Hand Lines 83
Air Compressors, Saylor-Beall 206
Heaters, Arvin 698
Heaters, Chromalox 221, 222
Heaters, Industrial, G-E 218
Heaters, M-B 698
Pumps, Beer Pressure, Saylor-Beall 206
Purifiers, Klenzair 700
Airport Approach Lights, Crouse-Hinds 597
Beacons, Crouse-Hinds 596
Boundry Lights, Crouse-Hinds 597
Floodlights, Crouse-Hinds 596
Obstacle Lights, Crouse-Hinds 597
Wind Cone Fixtures, Crouse-Hinds 596
Aisle Lights 588
Alabax Lighting Fixtures 556
Aligners, Fixture, Benjamin 583
Allen Benders, Pipe 276
Soldering Paste 253
Soldering Salts 252
Soldering Sticks 253
Alley Braces, Hubbard 33
American Beauty Glue Pots 222
Irons, Flat 697, 698
Irons, Soldering 217
American Standards, Street Lighting 113
Ammeters, Battery Testing, Sterling 171

A — Page

Ammeters, Panel, Weston 170
Portable, Weston 161–164
Switchboard, Weston 166–169
Amolier Fixtures, Graybar 542
Anchor Rods, Hubbard 28
Anchors, Calking, Diamond 94
Drive, Hammer, Diamond 95
Expanding, Chance 51
Expanding, Everstick 52
Guy, Chance 51
Guy, Hubbard 52
Guy, Never-Creep 51
Screw, Chance 51
Screw, Diamond 94
Steelwing, Hubbard 52
Swamp, Hubbard 52
Anderson Switches, Time 470
Angle Screws, Diamond 264
Announcers, Guest, Square D 637
Annunciator Cable 246
Wire 246
Annunciators, Desk, Edwards 613
Edwards 612–616
Elevator, Edwards 616
Faraday 615
Lamp, Edwards 614
Railway, Edwards 613
Return Call, Edwards 614
Annunciettes, Edwards 612
Ansercall Stations, Edwards 615
Anti-Short Bushings, National 277
Apartment House Inter-Phones, Graybar 651, 652
Apex Ironers 678
Apparatus, Remote Control, Street Lighting, G-E 140
Apparatus Cable, Deltabeston 248
Appliance Cord Connectors, R & S 418
Plugs, Acorn 416
Plugs, Hemco 416
Plugs, R & S 418
Receptacles, R & S 418
Switches, Toggle, Hubbell 432
Applicators, Heat and Light, Thermolite 554
Vibrator, Hamilton-Beach 699
Approach Lights, Airport, Crouse-Hinds 597
Arktite Plugs 339–342
Plugs and Receptacles 337, 338
Receptacles and Condulets 340–342
Receptacles and Housings 340–342
Armored Cable, Flexsteel 277
Cable, General 234
Cable, Ovalflex 282
Cable, Rubber, Tirex 242
Cable Boxes, National 291, 292
Lamp Cord, National 277
Submarine Cable, Habirshaw 228
Arms, Cross, Rainier 24, 25

A — Page

Arms, Cross, Shock Absorber, Benjamin 583
Cross, Steel, Hubbard 42
Kicker, Rainier 26
Mast, Benjamin 582
Mast, Hubbard 49
Arresters, Lightning, Crystal Valve 154
Lightning, G-E 152, 153
Lightning, Pellet, G-E 139
Arvin Heaters, Air 698
Assemblies, Lamp Holder, Reflector, Benjamin 570
Assortments, Brush, Carbon, National 209
Attachment Plug Caps, Bryant 392
Plug Caps, H & H 414
Plug Caps, Hubbell 402, 405
Plug Caps, Hubbell, Twist Lock 397, 398
Plug Caps, P & S-Despard 383
Plug Caps, Polarized, Bryant 395, 396
Plug Caps, Polarized, Hubbell 403, 405–410
Plugs, Bryant 391
Plugs, H & H 414
Plugs, Hubbell 401
Plugs, Medium Base, Bryant 369
Attachments, Circuit, Branch, Square D 448
Clutch and Kick-Out, Thor 216
Lock, Switch, Rotary, Bryant 424
Mixer, Hamilton-Beach 701
Mixmaster 701
Shunt Trip, Circuit Breaker, G-E 176
Socket, Pull, Hubbell 390
Undervoltage, Circuit Breaker, G-E 176
Audiometers, Western Electric 672
Audiphones, Western Electric 672
Augers, Telegraph, Chance 51
Automatic Controls, Mercoid 472
Automobile Pole Derricks, Graybar 65, 66
Automotive Wire and Cable, Whitney Blake 245
Auto-Transformers, G-E 146, 147, 149
Auxiliary Switches, Circuit Breaker, G-E 176

B

B & L Blocks 81
Blocks, Cable, Aerial 83
Cars, Cable, Aerial 83
Feeders, Cable 110
Frames, Pulling-In 110
Guides, Cable, Aerial 83
Hoists, Chain 82

B	Page
B & L Hooks, Booster	83
Hooks, C	83
Lines, Hand, Aerial	83
Sheaves and Tackles, Cable	110
Straighteners, Cable, Aerial	83
Bags, Glove, Lineman's, Salisbury	70
Tool, Klein	91
Tool, Non-Metallic, Salisbury	73
Baking Sets, Nesco	690
Ball Globes, Street Lighting	124
Bands, Pole, Hubbard	50
Reinforcing, Pole, Hubbard	29
Bar Hangers, Box	295
Lath Supports, National	294
Solder	96
Bar and Box Sets, National	292
Bare Copper Wire, General	239, 240
Barricades, Folding, Oshkosh	79
Barrow Reels, Oshkosh	79
Bars, Crow, Oshkosh	77
Digging, Oshkosh	77
Tamping, Oshkosh	77
Bases, Fixture, Condulet	358
Floodlight Projector, Crouse-Hinds	595
Socket, Hubbell	377, 378
Socket, New Wrinkle, Bryant	367
Socket, P & S	386
Socket, Porcelain, Bryant	372
Socket, Porcelain, Hubbell	380
Bathroom Brackets, Graybar	545
Batteries, Dry, Eveready	600, 601
Flashlight, Eveready	599
Lantern, Eveready	599
Primary, Edison	601–603
Radio, Dry, Eveready	600, 601
Storage, Exide	603
Storage, Titan	604
Battery Cable, Whitney Blake	245
Chargers, G-E	605–607
Charging Cable, Habirshaw	229
Charging Condulets, BRH Series	363
Charging Condulets, UG Series	363
Strips, Fused, Faraday	617
Switches, Trumbull	467
Bayonet Sockets, Bryant	369
Beacons, Airport, Crouse-Hinds	596
Beam Lights, Graybar	545
Beer Pressure Air Pumps, Saylor-Beall	206
Bell Push Plates, Bryant	427
Push Plates, H & H	441
Pushes, P & S-Despard	384
Ringing Transformers, Edwards	609
Ringing Transformers, Jefferson	608
Bells, Burglar Alarm, Edwards	628
Clapper Type, Edwards	629, 630
Code Calling, Benjamin	623
Combination, Graybar	627
E-Line, Edwards	626
End, Cable, Three-E	106
Faraday-Ekla	635
Iron Box, Edwards	626
Lungen	627
Monitor, Edwards	628
Monitor, PR	632
Nubel, Edwards	626
PR	631, 632, 635
Plunger Type, Edwards	629
Recti, Edwards	630
Single Stroke, Edwards	628, 630
Skeleton, Edwards	628

B	Page
Bells, Telephone, Western Electric	664
Trouble, Faraday	634
Vibrating, Skeleton, Faraday	635
Vibrating Type, Edwards	628
Belts, Derrick, Klein	91
Tool, Linemen's	91
Bench Grinders, Speedway	212
Grinders, Thor	215
Benco Holders, Shade	389
Sockets, Weatherproof	389
Benders, Conduit, Steel City	276
Conduit, T & B	276
Pipe, Allen	276
Pipe, T & B	276
Benjamin Aligners, Fixture	583
Arms, Mast	582
Bells, Code Calling	623
Bodies, Fixture	585
Brackets	582, 585
Buzzers, Industrial	624
Covers, Outlet Box	575
Covers, Reflector, Glass	581
Crossarms	583
Diffusers, Glassteel	567, 572
Extensions, Socket	390
Fittings, Marine	584
Fittings, Socket, Reflector	575
Fittings, Suspension	572
Fittings, Suspension, Cable	583
Fixtures, Dust-Proof	579
Fixtures, Explosion-Proof	578
Fixtures, Gas and Vaporproof	578
Fixtures, Gymnasium	581
Fixtures, Lighting, Pit	566
Fixtures, Moisture-Proof	579
Fixtures, Threaded	573
Fixtures, Unit-Package	579
Fixtures, Vapor-Seal	578
Fixtures, Watertight	584
Floodlights	565, 566
Globes, Screw	584
Goosenecks	582
Grips, Cord	575
Guards, Coiling	582
Guards, Lamp, Watertight	585
Holders, Reflector	577
Hoods, Reflector	570, 576
Hoods, Threaded	573, 574
Howlers	622–624
Inspection-Lites	580
Intensifiers	580
Kode-Kalls	623
Lamp Holder Assemblies	570
Mobilites	566
Outlet Boxes and Hoods, Combination	574
Panels and Cabinets	496–504
Projectolites, Vaporproof	579
Push Buttons	624
Reflectors, Bulletin	580
Reflectors, Glassteel	567, 572
Reflectors, Half	583
Reflectors, Separable Hood	576
Reflectors, Sewing Machine	582
Reflectors, Shade Holder	577, 581–583
Reflectors, Sign	578
Reflectors, Sign, Emblem	580
Reflectors, Socket	571, 572
Reflectors, Threaded	573
Reflectors, Tubular	583
Reflectors, Type RLM	567–569
Reflectors, Type RR	573

B	Page
Benjamin Reflectors, Type 79	567–569
Reflectors, Weatherproof	583
Relays, Signal System	624
Relays, Telecode	624
Rings, Globe Holding	585
Shade Holders, Benco	389
Signals, Fire Alarm	624
Signals, Industrial	622, 623
Sockets, Benco	389
Sockets, Fixture	576
Sockets, Locking	575
Sockets, Reflector	574, 575
Sockets, Shock Absorbing	574
Sockets, Weatherproof	390
Stems, Fixture	582
Suspensions, Chain	582
Variety-Lites	579
Bezels, Reflector, Condulet	358
Binders, Graybar	69
Binding Posts, Fahnestock	263
Bi-Pass-Ors, Thermal, Brach	268
Blake Staples, Insulated	265
Blank Plates, H & H	441
Plates, Hubbell	412, 436
Blankets, Heating, Hewitt	699
Protective, Rubber, Salisbury	71
Sweat, Hewitt	699
Block Tackles, Klein	86
Blocks, Cable, Aerial	83
Connection, Condulet	358
Connection, Condulet, Type GS	324
Connection, Type YE	364
Fuse, Enclosed, D & W	477
Fuse, Enclosed, FA	477
Hoisting, Chain, B & L	82
Pass-Over, Rainier	26
Protector, Telephone	666
Pulley, Chance	86
Push Button, Edwards	638
Snatch, Aluminum Cable	82
Snatch, Copper Cable	82
Snatch, Manila Rope	81, 82
Snatch, Stringing	82
Snatch, Wire Rope	82
Spacer, Rainier	26
Tackle, Manila Rope	81
Terminal, Triplex	621
Troublemen's, Klein	86
Blow Torches, Klein	96
Blowers, Portable, Speedway	207
Portable, Sturtevant	207
Volume, Ilg	208
Boards, Panel, Benjamin	496–504
Panel, Bull Dog	493–495
Panel, FA	505–519
Panel, Square D	491, 492
Panel, Trumbull	520–522
Bodies, Connector, Cord, Bryant	392
Connector, Cord, Hemco	392
Fixture, Watertight, Benjamin	585
Plug, Hemco	391
Receptacle, Fixture, Hubbell	401
Receptacle, Plug, New Wrinkle, Bryant	367
Socket, Cold Molded, Bryant	369
Socket, Electrolier, Bryant	368
Socket, Hubbell	377, 378
Socket, Intermediate, Bryant	371
Socket, Mogul, Bryant	376
Socket, New Wrinkle, Bryant	367
Socket, P & S	386
Socket, Porcelain, Bryant	372
Socket, Porcelain, Hubbell	380

B Page

Bodies, Socket, Titan, Bryant.... 369
Switch, Hubbell..... 377
Switch, New Wrinkle, Bryant... 367
Truck, Kiley..... 62
Bolt Clippers, Porter..... 90
Eyes, Hubbard..... 30
Bolts, Carriage, Hubbard..... 32
Crossarm, Hubbard..... 31
Double Arming, Hubbard..... 32
Expansion, Di-En-Key..... 93
Expansion, Peirce..... 94
Eye, Hubbard..... 32
Guy, Hubbard..... 52
Guyeye, Hubbard..... 31
Machine, Hubbard..... 31
Telephone Bracket, Hubbard.... 34
Toggle, Diamond..... 93
Bondnuts, National..... 273
Booster Hooks, Cable, Aerial..... 83
Boosting Transformers, G-E..... 147
Borderlights, Century..... 588
Kliegl..... 589
Boring Equipment, Earth, Graybar..... 63
Bottle Warmers, Hankscraft..... 696
Boundary Lights, Airport, Crouse-Hinds..... 597
Box Connectors, Flexsteel.... 277–279
Connectors, T & B.....280, 281
Covers, P & S-Despard..... 384
Covers, Polarized Receptacle, Bryant..... 396
Dividers, P & S-Despard..... 383
Hangers, Outlet..... 295
Box and Bar Sets, National..... 292
Boxes, Cable, Armored, National.....291, 292
Ceiling.....287, 288
Conduit.....287–292
Cutout, Columbia.....488, 489
Floor, Fullman.....301–303
Floor, R & S..... 304
Floor, Steel City..... 301
Floor, T & B..... 301
Flush Device, National..... 294
Fuse, Colt-Noark..... 485
Gang, National..... 291
Generator, Telephone..... 664
Hanger, Fixture, R & S..... 294
Junction, Columbia.....488, 489
Junction, Floor Nepcoduct..... 298
Junction, T & B.....295, 296
Junction, Transformer, G-E..... 148
Loom, National..... 291
Mail, Vestibule, Graybar..... 652
Meter, Indoor, Square D..... 448
Meter, Outdoor, Square D..... 449
Outlet.....287–292
Panel, Columbia.....488, 489
Service, Colt-Noark..... 485
Switch, Columbia.....488, 489
Switch, National.....292–294
Telephone, Desk Set..... 666
Weatherproof, T & B..... 295
Boxes and Hoods, Outlet, Combination, Benjamin..... 574
Boxes and Receptacles, Floor, Steel City..... 301
Brace Fittings, Trench, Simplex... 108
Braces, Alley, Hubbard..... 33
Crossarm, Hubbard..... 33
Crossarm, Rainier..... 33

B Page

Braces, Trench, Simplex..... 108
Vertical, Hubbard..... 33
Brach Bi-Pass-Ors, Thermal..... 268
Detectors, High Tension..... 171
Indicators, High Voltage, Neon.. 171
Thermal Bi-Pass-Ors..... 268
Bracket Bodies, Fixture, Benjamin 585
Fixtures, Benjamin..... 579
Reflectors, Day-Brite..... 549
Specifications, Rainier..... 23
Brackets, Bathroom, Graybar.... 545
Benjamin..... 582
Corner, Telephone, Hubbard.... 34
Curtistrip..... 562
Dead-End, Peirce..... 47
Distributing, Telephone, Hubbard..... 34
Fixture, Wall, Benjamin..... 585
Floodlight Projector, Crouse-Hinds..... 595
Lamp Lead, Hubbard..... 48
Lighting, Adjustable, Tafco..... 555
Outdoor Lighting, Benjamin.... 582
Spreader, Peirce..... 46
Street Hood, Hubbard.....48, 49
Street Lighting, Novalux, G-E... 134
Transformer, G-E..... 148
Wall, Graybar..... 545
Wood..... 23
Bragdon Sockets, Bryant..... 374
Branch Circuit Attachments, Square D..... 448
Extensions, Condulet, Type OCB 311
Breakers, Circuit, G-E.....173–177
Circuit, Square D.....449, 450
Circuit, Trumbull..... 461
Meter Service, Square D..... 450
Brick Drills, Diamond..... 95
Bridle Rings, Diamond..... 264
Wire Insulators, Diamond..... 264
Broadcasting Equipment, Western Electric..... 673
Broilers, Silex..... 695
Bronx Buzzers, Watchcase..... 627
Brush Assortment, Carbon, National..... 209
Hooks, Oshkosh..... 79
Bryant Adapters, Ediswan to Spartan..... 369
Adapters, Medium to Intermediate..... 371
Adapters, Spartan to Edison.... 392
Attachments, Switch Lock, Rotary..... 424
Connectors, Cord..... 262
Connectors, Cord, Polarized..... 395
Connectors, Wire..... 262
Cord Connector Bodies..... 392
Cord Sets..... 396
Finishes, Special..... 429
Fuses, Plug..... 474
Handles, Switch, Heater..... 424
Handles, Switch, Rotary..... 424
Jewels, Bull's Eye..... 395
Keys, Socket..... 367
Keys, Switch..... 424
Links, Insulating..... 370
Links, Splicing..... 370
Outlets, Fan Hanger..... 417
Pilot Caps..... 392
Pilot Lights and Receptacles, Combination..... 394

B Page

Bryant Pilot Lights and Switches, Combination..... 394
Plate Finishes..... 429
Plate Sections, Flush.....430, 431
Plates, Bell Push..... 427
Plates, Louver..... 395
Plates, Pilot Light and Receptacle..... 394
Plates, Pilot Light and Switch... 394
Plates, Receptacle, Polarized.... 396
Plates, Receptacle and Pilot Light..... 394
Plates, Switch.....427, 428
Plates, Switch and Pilot Light... 394
Plug Caps, Attachment..... 392
Plug Caps, Attachment, Polarized..... 395
Plug Caps, Motor..... 392
Plugs, Attachment..... 391
Plugs, Attachment, Medium Base..... 369
Plugs, Fuseless..... 474
Receptacle Bodies, Plug, New Wrinkle..... 367
Receptacles, Bull's Eye..... 395
Receptacles, Candelabra..... 370
Receptacles, Cleat, Mogul..... 376
Receptacles, Cleat, Porcelain.373, 374
Receptacles, Concealed, Porcelain..... 375
Receptacles, Double End, Porcelain..... 374
Receptacles, Fixture..... 392
Receptacles, Flush.....393, 394
Receptacles, Industrial..... 371
Receptacles, Intermediate..... 371
Receptacles, Marine..... 371
Receptacles, Miniature..... 370
Receptacles, Mogul..... 376
Receptacles, Molding, Porcelain..... 373
Receptacles, Outlet Box, ...372–374, 392, 393
Receptacles, Polarized.....395, 396
Receptacles, Prefocusing..... 371
Receptacles, Railway..... 371
Receptacles, Range..... 396
Receptacles, Sign, Porcelain..... 375
Receptacles, Weatherproof..... 375
Receptacles and Pilot Lights, Combination..... 394
Receptacles and Switches, Plug, Combination..... 394
Reducers, Socket..... 376
Rosettes, Porcelain..... 376
Shade Holders..... 390
Socket Bases, New Wrinkle..... 367
Socket Bases, Porcelain..... 372
Socket Bodies, Cold Molded..... 369
Socket Bodies, Intermediate..... 371
Socket Bodies, Mogul..... 376
Socket Bodies, New Wrinkle..... 367
Socket Bodies, Porcelain..... 372
Socket Bodies, Titan..... 369
Socket Bodies, Wrinklet..... 368
Socket Caps, Cold Molded..... 369
Socket Caps, Intermediate..... 371
Socket Caps, Mogul..... 376
Socket Caps, New Wrinkle..... 367
Socket Caps, Porcelain..... 372
Socket Caps, Titan..... 369
Socket Caps, Wrinklet..... 368
Socket Finishes..... 429

B Page

Bryant Sockets, Bayonet 369
Sockets, Bragdon 374
Sockets, Candelabra 370
Sockets, Composition, Cold Molded 369
Sockets, Double Filament Lamp. 376
Sockets, Electrolier 369
Sockets, Intermediate 371
Sockets, Mogul 376
Sockets, Molded 369
Sockets, Pony, Wall 373
Sockets, Porcelain Lined 369
Sockets, Prefocusing 371
Sockets, Titan 369
Sockets, Twin 368
Sockets, Weatherproof 374
Sub-Bases, Switch, Porcelain 423
Switch Bodies, New Wrinkle 367
Switches, Canopy 425
Switches, Cord 424
Switches, Door 419
Switches, Electrolier 421
Switches, Expulsion Type ... 421, 422
Switches, Heater, Surface 423
Switches, Motor Control 421
Switches, Pendent 424
Switches, Pull 424, 425
Switches, Push 425
Switches, Railway 422
Switches, Range 423
Switches, Rotary, Surface ... 420–423
Switches, Tumbler, Flush 425, 426
Switches, Tumbler, Surface 423
Switches and Pilot Lights, Combination 394
Switches and Plug Receptacles, Combination 394
Bulbs, Tungar, G-E 607
Bull-Dog Fusenters, Safety 490
Guards, Lamp 532
Panels and Cabinets 493–495
Switches, General Service 453
Switches, Safety 451–453
Bulletin Reflectors, Benjamin 580
Bulls' Eye Jewels, Bryant 395
Jewels, Hubbell 411
Signals, Kirkland 616
Bulls' Eyes, Hubbell 411
Bulls' Eyes and Receptacles, Combination, H & H 414
Bull's Eyes and Switches, Combination, Hubbell 400
Bulls-I-Plaques, Kirkland 616
Bulls-I-Units, Kirkland 616
Bunghole Lamp Guards, Morse ... 531
Lamps, R & S 532
Burglar Alarm Bells, Edwards ... 628
Control Cabinets, Faraday 643
Lock Switches, Edwards 644
Relays, Edwards 644
Springs, Edwards 644
Traps, Edwards 644
Burnley Paste, Soldering 253
Salts, Soldering 252
Soldering Sticks 253
Bus Clamps, Three-E 157
Signal Push Buttons, Graybar ... 627
Signal Buzzers, Graybar 627
Supports, Three-E 155, 156
Bushcaps, National 273
Bushings, Anti-Short, National ... 277
Capped, T & B 273
Conduit, Federal 268

B Page

Bushings, Conduit, National .. 272, 273
Conduit, T & B 272
Conduit, Threadless, Type UCE. 366
Ground, T & B 273
Groundulet 356
Socket, Hubbell 390
Buss Fuses, Enclosed 480, 481
Fuses, Plug 475
Fusetrons 475
Lamps 555
Button Blocks, Push, Edwards 638
Plates, Push, Edwards 640, 641
Buttons, Push, Benjamin 624
Push, Bus Signal, Graybar 627
Push, Edwards 638–642
Push, Faraday 640
Buzzers, Bus Signal, Graybar 627
E-Line, Edwards 626
Flush, Edwards 627
Industrial, Benjamin 624
Iron Box, Edwards 626
Lungen 627
Nubel, Edwards 626
PR 631, 632
Recti, Edwards 630
Signal, Faraday 633–636
Special-Toned, Faraday 634, 636
Watchcase, Edwards 627

C

C Hooks, Cable, Aerial 83
Cab Connection Condulets, Type YE 364
Cabinets, Control, Burglar Alarm, Faraday 643
Fuse, Combination, Colt-Noark .. 457
Fuse, Square D 490
Interconnection, Faraday 617
Panel Board, Benjamin 496–504
Panel Board, Bull-Dog 493–495
Panel Board, FA 505–519
Panel Board, Square D 491, 492
Panel Board, Trumbull 520–522
Steel, Columbia 488, 489
Switching and Fuse, Three-E 155
Cable, Aerial, Habirshaw 228
Annunciator 246
Apparatus, Deltabeston 248
Armored, Flexsteel 277
Armored, General 234
Armored, Ovalflex 282
Armored, Rubber, Tirex 242
Battery, Whitney Blake 245
Charging, Battery, Habirshaw ... 229
Coarse Strand, Deltabeston 248
Control, Habirshaw 229
Control, Trenchlay 237
Corona-Proof, Habirshaw 228
Drop, Service, General 234
Drop, Service, Habirshaw 229
Entrance, Service, General 234
Feeder, General 247
Fire Alarm, Habirshaw 228
Flexible, Habirshaw 230
Flexible Strand, Daltabeston 248
Grounding, General 238
High Voltage, General 238
House, Rubber Covered, Habirshaw 225
Ignition, Whitney Blake 245
Inter-Phone, Graybar 653, 654
Inter-Phone, Whitney Blake 654

C Page

Cable, Lead Covered, General. 231, 232
Lead Covered, Habirshaw 226
Lead Covered, Telephone 668–671
Lighting, Whitney Blake 245
Mast-arm, Habirshaw 228
Mine, Habirshaw 230
Mining, General 238
Mining Machine, Tirex 243
Motor Lead, Tirex 243
Neonlite, Gas Tube, Whitney Blake 245
Parkway, General 233, 234
Parkway, Habirshaw 227
Rubber Covered, General 231–239
Rubber Covered, Habirshaw . 223–230
Sheathed, Non-Metallic, General. 234
Sheathed, Non-Metallic, Loom Wire 282
Shot Fire, Tirex 243
Signal, Habirshaw 228
Signal, Railway Trenchlay 237
Signaling System, Whitney Blake 654
Starting, Whitney Blake 245
Station, Deltabeston 248
Submarine, Armored, Habirshaw. 228
Super Service, General 237, 238
Telephone, Lead Covered 668–671
Trenchlay, General 235–237
Varnished Cambric, General 232
Varnished Cambric, Habirshaw .. 229
Weatherproof, General 241
Welding, General 238
Welding, Tirex 243
Cable Blocks, Aerial 83
Booster Hooks, Aerial 83
Boxes, Armored, National ... 291, 292
C Hooks, Aerial 83
Cars, Aerial 83
Clamps, Diamond 265, 275
Clips, T & B 275
Connectors, Bryant 262
Connectors, Dossert 258
Connectors, Frankel 260
Connectors, Ideal 262
Connectors, National ... 107, 263, 264
Connectors, Reliable 257
Connectors, Sherman 255
Connectors, T & B 256
Duct Shields, Hubbard 110
End Bells, Three-E 106
Entrance Fittings, Pothead, G & W 106
Feeders, B & L 110
Grips, Reliable 109
Guards, Hubbard 26
Guides, Aerial 83
Guides and Straighteners, Aerial. 83
Hangers, Marline, National 265
Jacks, Simplex 73
Pulling-In Frames, B & L 110
Rack Insulators, Peirce 111
Racks, Hubbard 111
Racks, Peirce 111
Reel Capacities 230
Reel Jacks, Simplex 73, 74
Reel Trailers, Graybar 68
Reels, Gleason 251
Ring Saddles, National 265
Rings, National 265
Sheath Splitting Knives, Klein .. 89
Sheaves and Tackles, B & L 110
Splicers' Carts, Graybar 69

C Page

Cable Splicing and Jointing Materials, General 107, 240
Supports, Conduit, R & S 275
Suspension Clamps, Hubbard 34
Suspension Fittings, Benjamin 583
Taps, Dossert 259
Taps, Frankel 261
Taps, T & B 256
Terminals 663
Terminals, Circuit Breaker, G-E 176
Terminals, G & W 105
Terminals, General 104
Calking Anchors, Diamond 94
Call Panels, Residence, Faraday 631, 632
Candelabra Receptacles, Bryant 370
Sockets, Bryant 370
Sockets, Hubbell 379
Candle Sockets, Hubbell 379
Candles, Electric, Eveready 599
Canopy Pull Switches, H & H 442
Switches, Bryant 425
Cant Hook Handles 76
Hooks, Oshkosh 76
Canvas, Varnished 99
Capped Bushings, T & B 273
Caps, Attachment Plug, Hubbell, Twist Lock 397, 398
Color, Indicating Lamp, Receptacle and Resistor, G-E 179
Conduit, National 273
Condulet, Service Entrance 321
Pilot, Bryant 392
Plug, Attachment, Bryant 392
Plug, Attachment, H & H 414
Plug, Attachment, Hubbell 402, 405
Plug, Attachment, P & S-Despard 383
Plug, Attachment, Polarized, Bryant 395, 396
Plug, Attachment, Polarized, Hubbell 403–410
Plug, Hemco 391
Plug, Motor, Bryant 392
Polarized, Hubbellock 399
Radio, P & S-Despard 383
Socket, Cold Molded, Bryant 369
Socket, Electrolier, Bryant 368
Socket, Hubbell 377, 378
Socket, Intermediate, Bryant 371
Socket, Mogul, Bryant 376
Socket, New Wrinkle, Bryant 367
Socket, P & S 386
Socket, Porcelain, Bryant 372
Socket, Porcelain, Hubbell 380
Socket, Titan, Bryant 369
Test, Salisbury 73
Twist-Lock, Hubbell 397, 398
Capstans, Chance 86
Car Jacks, Simplex 75
Vestibule Fixtures, Condulet, Type SRH 359
Carbon Brush Assortments, National 209
Card Holder Pushes, Edwards 642
Carriage Bolts, Hubbard 32
Carrying Hook Handles 76
Hooks, Oshkosh 76
Cars, Cable, Aerial 83
Cartridge Fuses, Buss 480, 481
Fuses, D & W 478
Fuses, Eco 481
Fuses, Economy 479
Fuses, Gem 484

C Page

Cartridge Fuses, Jefferson 482
Fuses, Union 483, 484
Carts, Splicers', Cable, Graybar 69
Cases, Tool, Linemen's, Klein 89
Cashier Cage Reflectors, Day-Brite 550
Casings, Fuse, Plug, D & W 475
Casserole-Hot Plate Combinations, Everhot 689
Casseroles, Everhot 688
Nesco 690
Cedar Poles 7–13
Ceiling Band Holders, Graybar 545
Boxes 287, 288
Fans, Graybar 684
Fixtures, Adjustable, Tafco 555
Fixtures, Watertight, Benjamin 584
Guards, Benjamin 582
Height Indicators, Crouse-Hinds 596
Height Projectors, Crouse-Hinds 596
Plates 287, 288
Receptacles, Porcelain, Hubbell 380, 381
Cells, Dry, Eveready 600, 601
Flashlight, Eveready 599
Lantern, Eveready 599
Primary, Edison 601–603
Centering Washers, Peirce 40
Centers, Load, Square D 492
Central Battery Telephones 659, 660
Century Borderlights 588
Footlights 588
Pockets, Floor and Wall 588
Chafing Dishes, M-B 694
Chain, Socket, Hubbell 379
Chain, Acorns, Socket, Hubbell 379
Finishes, Bryant 429
Hoists, B & L 82
Insulating Links, Socket, Hubbell 379
Insulators, Socket, Hubbell 379
Splicing Links, Socket, Hubbell 379
Suspensions, Benjamin 582
Tassels, Socket, Hubbell 379
Chance Anchors, Expanding 51
Anchors, Guy 51
Anchors, Screw 51
Augers, Telegraph 51
Blocks, Pulley 86
Capstans 86
Changers, Lamp 529
Channel, Lighting, Curtistrip 561, 562
Lighting, Lightstrip 560
Chargers, Battery, G-E 605–607
Charging Cable, Battery, Habirshaw 229
Charts, Illumination, G-E 199
Chase Nipples, Conduit 273
Chatterton Compound 252
Chestnut Poles 7
Chimes, Code Calling, Benjamin 623
Dinner, Deagan 637
Door, Deagan 637
Door, Square D 637
Chiming Clocks, Revere 705, 706
Chipping Hammers, Linemen's 93
Christmas Tree Holders 529
Tree Lighting Outfits 529
Chromalox Heaters, Air 221, 222
Heaters, Immersion 220
Heaters, Strip 219
Chucks, Hand, Peirce 96
Circuit Attachments, Branch, Square D 448

C Page

Circuit Breaker Panels, Transformer, G-E 137
Breakers, G-E 173–177
Breakers, Square D 449, 450
Breakers, Trumbull 461
Clamp Pins, Peirce 38
Sockets, Porcelain, Federal 390
Clamps, Bus, Three-E 157
Cable, Diamond 265, 275
Cable Suspension, Hubbard 34
Conduit, Diamond 274, 275
Conduit, Di-Stampt 274
Conduit, Sherman 273
Ground, Reliable 274
Ground, Sherman 273
Guy, Hubbard 29
Pipe, Diamond 274, 275
Pipe, Sherman 273
Rod, Ground, Hubbard 28
Span, Hubbard 35
Splicing, Klein 84
Table, Edwards 641
Tube and Connector, Bryant 396
Wire and Sleeve, Klein 84
Clapper Type Bells, Edwards 629, 630
Clay Conduit Natco 101–103
Cleaners, Vacuum, Graybar 681
Clearsite Plug Fuses 475
Cleat Receptacles, H & H 390
Receptacles, Mogul, Bryant 376
Receptacles, Mogul, Hubbell 382
Receptacles, Porcelain, Bryant 373, 374
Receptacles, Porcelain, Hemco 375
Receptacles, Porcelain, Hubbell 380, 381
Cleats, Outlet Box 295
Porcelain, Thomas 266, 267
Suspension, Porcelain, P & S 389
Telephone, Thomas 266
Clevises, Corner, Peirce 44
Crossarm, Peirce 44
Dead End, Klauber 44
Dead-End, Peirce 44
Insulated, Peirce 44
Insulator, Strain, Hubbard 41, 43, 44
Thimble, Peirce 44
Climber Straps, Linemen's 90, 91
Climbers, Linemen's 90
Clippers, Bolt, Porter 90
Clips, Cable, T & B 275
Fuse, Square D 476
Test, Reliable 262
Test, Universal 262
Wire Rope, Hubbard 29
Clock Hanger Outlets, H & H 416
Hanger Outlets, Hubbell 417
Clocks, Chiming, Revere 705, 706
Electric, Telechron 703–706
Program, Self-Winding 618
Closet Lights, Graybar 545
Cloth, Micanite 99
Clothes Washers, Graybar 677
Clutch and Kick-Out Attachments, Thor 216
Coarse Strand Cable, Deltabeston 248
Coating, Pike Pole, Oshkosh 77
Coats, Line, Static-Resisting, Salisbury 71
Rubber, Salisbury 71
Code Calling Bells, Benjamin 623
Calling Signals, Benjamin 623
Coffee Makers, Glass, Silex 692, 693

C Page

Coffee Percolators, M-B..... 691
Services, M-B..... 691
Services, Silex..... 693
Urns, Drip, Automatic..... 693
Urns, M-B..... 691
Cold Molded Sockets, Bryant..... 369
Collapsible Power Reels, Graybar..... 68
Colonial Radio Sets..... 675
Color Caps, Indicating Lamp, Receptacle and Resistor, G-E.... 179
Screens, X-Ray..... 560
Colt-Noark Boxes, Fuse..... 485
Boxes, Service..... 485
Cabinets, Fuse..... 457
Fittings, Service and Fuse Box.....486, 487
Switches, Entrance..... 457
Switches, Meter Service.....456, 457
Switches, Safety.....453–457
Columbia Batteries, Dry..... 600
Cabinets, Steel.....488, 489
Combination Bells, Graybar..... 627
Floor Extensions, R & S..... 304
Plates, H & H.....441, 442
Plates, Hubbell.....413, 437
Combinations, Convenience Outlet and Pilot Light, Hubbell... 400
Convenience Outlet and Switch, Hubbell..... 400
Plug Receptacle and Switch, Bryant..... 394
Receptacle and Pilot Light, Bryant..... 394
Switch and Bull's Eye, Hubbell.. 400
Switch and Pilot Light, Bryant.. 394
Commercial Fixtures, Graybar.....535–545
Compakts, Kitchen, Everhot..... 689
Compensators, Motor Starting, G-E.....195, 196
Composition Sockets, Cold Molded, Bryant..... 369
Compound, Chatterton..... 252
Filling, Ozite..... 107
Splicing..... 252
Compressed Air Jack Hoists, Joyce..... 75
Compressors, Air, Saylor-Beall... 206
Concealed Receptacles, Porcelain, Bryant..... 375
Receptacles, Porcelain, P & S... 387
Concrete Drills, Diamond..... 95
Outlet Boxes, National..... 291
Standards, Street Lighting..... 113
Condenser Meters, Panel, Weston. 170
Condensers, Western Electric.... 663
Conductor Fittings, Three-E..... 157
Conduit, Clay, Natco.....101–103
Fibre.....100–111
Flexible, Flexsteel..... 277
Flexible, Non-Metallic, Flextube. 282
Sizes of..... 271
Steel, Rigid.....270, 271
Steeltubes..... 272
Wood, Creosoted..... 103
Conduit Benders, Steel City..... 276
Benders, T & B..... 276
Boxes.....287–292
Boxes, Columbia.....488, 489
Bushings, Federal..... 268
Bushings, National.....272, 273
Bushings, T & B..... 272

C Page

Conduit Bushings, Threadless, Type UCE..... 366
Cable Supports, R & S..... 275
Caps, National..... 273
Clamps, Diamond.....274, 275
Clamps, Di-Stampt..... 274
Clamps, Sherman..... 273
Couplings, Combination, T & B. 281
Couplings, Explosion-Proof..... 337
Couplings, Flexsteel..... 279
Couplings, Rigid Steel..... 271
Couplings, T & B..... 274
Elbows, Large Radius..... 272
Elbows, R & S..... 295
Elbows, Rigid Steel..... 271
Elbows, Steeltubes..... 272
Fittings, Rigid Steel..... 271
Fittings, Service and Fuse Box, Colt-Noark.....486, 487
Fittings, Steeltubes..... 272
Hangers, T & B..... 275
Hickeys, T & B..... 276
Hub Plates, FA Series..... 352
Hub Plates, MF Series..... 352
Hub Plates, MK Series..... 352
Hub Plates, RSMP Series..... 347
Hub Plates, RSP Series..... 347
Hub Plates, YYP Series..... 352
Locknuts, National..... 272
Locknuts, T & B..... 272
Nipples, Chase..... 273
Pushes, Edwards..... 640
Rods..... 107
Specifications, Rainier..... 24
Straps..... 274
Straps, Hubbard..... 26
Tees, R & S..... 295
Unions, Threadless, Type UCC.. 366
Wedge Lugs, T & B..... 273
Condulet Adapters, Type OHN... 311
Arktite Plugs.....339–342
Branch Extensions, Type OCB.. 311
Car Vestibule Fixtures, Type SRH..... 359
Conduit Couplings, Explosion-Proof..... 337
Connection Blocks..... 358
Connection Blocks, GS Series.... 324
Connectors, Type CCT..... 366
Connectors, Threadless, Type UCA..... 365
Connectors, Threadless, Type UCB..... 366
Covers, BLM Series..... 358
Covers, BO Series..... 358
Covers, CL Series..... 358
Covers, Explosion-Proof..... 330
Covers, FD Series.....314–316
Covers, FS Series.....314–317
Covers, G-H Series.....319, 321
Covers, GS Series..... 324
Covers, J-K Series..... 322
Covers, LO Series..... 358
Covers, LP Series..... 358
Covers, Mogul..... 312
Covers, Obround.....309–311
Covers, Service Entrance, Type F..... 321
Covers, Type RS..... 347
Covers, Type S..... 325
Covers, Type SK..... 326
Elbows..... 366
Fittings, Explosion-Proof..... 338

C Page

Condulet Fixture Bases..... 358
Fixture Rings, Type UCY..... 355
Fixtures..... 358
Gaskets, Obround Series..... 365
Guard Fixtures, Type GH..... 320
Guard Fixtures, Type GS..... 324
Heater Units, Switch..... 336
Housings, Receptacle, Type BRD..... 315
Housings, Receptacle, Type BRG..... 325
Housings, Receptacle, Type BRY..... 349
Housings, Receptacle, Type QE.....343, 344
Housings, Switch, Type QE.....343, 344
Lamp Receptacles, Type CRSE. 358
Lamp Receptacles, Type SRH... 358
Lamps, Portable, Type EVA..... 332
Lamps, Portable, Type EVS..... 332
Lamps, Portable, Type LPG..... 326
Lamps, Portable, Type LPH..... 326
Lamps, Portable, Type VS..... 326
Panelboards, Explosion-Proof.... 335
Parts, Vaporproof Fixture..... 329
Pedestals..... 366
Pit Lights, Explosion-Proof..... 337
Plugs, Battery Charging..... 364
Plugs, Type BP.....345–347
Plugs, Type CP.....339–341
Plugs, Type DP..... 353
Plugs, Type RQ..... 345
Plugs and Receptacles, Arktite.....337, 338
Reducers..... 365
Reflector Bezels..... 358
Reflector Holders..... 358
Reflectors..... 358
Switches, Knife, Type YKK..... 350
Unions, Type CCU..... 366
Unions, Type UNY..... 365
Vaporproof Fixtures, GS Series.. 324
Vaporproof Fixtures, Industrial.....327–329
Vaporproof Fixtures, Type ARB.....326, 358
Wiring Devices, G-H Series..... 321
Wiring Devices, GS Series..... 324
Wiring Devices, J-K Series..... 322
Wiring Devices, Obround Series.. 311
Wiring Devices, S Series..... 325
Condulets, Arktite..... 338
Battery Charging, BRH Series.. 363
Battery Charging, UG Series.... 363
Cab Connection, Type YE..... 364
Connector, Type MD..... 362
Connector, Type MDA..... 362
Deck Light, LM Series..... 362
Filler Hole Lamp, LG Series.... 361
Gasoline Pump, Explosion-Proof. 333
Gauge Lamp, Type LG..... 360
Hanger, Fixture.....353–355
Junction, Explosion-Proof....329–331
Junction, GR Series..... 357
Junction, PR Series..... 348
Lighting Fixture, Explosion-Proof.....332, 333
Mogul..... 312
Obround.....305–311
Obround, Threadless.....307–309
Panelboard, Explosion-Proof.334, 335
Pilot Lights, Explosion-Proof.... 332

C Page

Condulets, Railway 357–364
Reading Light, Engineers', LMK Series 361
Sealing, Type EYS 337
Service Entrance, Obround 321
Sign Lighting, Explosion-Proof 332
Stack Lamp, LG Series 361
Switch, Explosion-Proof 333–336
Switch, FS Series 359
Switch, Headlight, LHS Series 362
Switch, Safety, FA Series 351
Switch, Safety, Type MKS 352
Switch, Safety, Type ZT 353
Telephone Jack 359
Tender Lamp, LD Series 360
Tender Lamp, LE Series 361
Threadless, FS Series 314–317
Threadless, Fixture Hanger 354
Threadless, G-H Series 315, 316
Threadless, J-K Series 322
Threadless, Obround 307–309
Type A 305
Type A, Threadless 307
Type ALA, Fixture Hanger 353
Type ALA, Fixture Hanger, Threadless 354
Type ALC, Fixture Hanger 353
Type ALC, Fixture Hanger, Threadless 354
Type ALL, Fixture Hanger 353
Type ALL, Fixture Hanger, Threadless 354
Type ALT, Fixture Hanger 353
Type ALT, Fixture Hanger, Threadless 354
Type B 305
Type B, Threadless 307
Type BC 312
Type BEE 312
Type BLB 312
Type BLMC 357
Type BO 357
Type BOC 357
Type BRH 363
Type BRHA 363
Type BRHE 363
Type BRM 345
Type BRME 346
Type BT 312
Type BTB 312
Type BU 312
Type BUB 312
Type BUF 312
Type BX 312
Type C 305
Type C, Threadless 307
Type CL 357
Type CLA 357
Type CLC 357
Type CLL 357
Type CLT 357
Type CMB 306
Type CO 305
Type CO, Threadless 307
Type COV 305
Type CUB 305
Type CXX 357
Type E 305
Type E, Threadless 308
Type ELB 355
Type ET 355
Type ETE 355
Type EV 332

C Page

Condulets, Type EVA 332
Type EVG 333
Type EVH 332
Type EVS 332
Type EY 355
Type EYS 337
Type F 305
Type F, Service Entrance 321
Type FA 351
Type FAC 351
Type FBA, Service Entrance 321
Type FBB, Service Entrance 321
Type FD 313
Type FDA 313
Type FDC 313
Type FDCA 313
Type FDCC 313
Type FDCT 313
Type FDD 313
Type FDL 313
Type FDLA 313
Type FDR 313
Type FDT 313
Type FDX 313
Type FJC 348
Type FLF 336
Type FLP 335
Type FLS 335
Type FS 313, 315, 317, 359
Type FS, Explosion-Proof 333, 334
Type FS, Threadless 314, 316, 317
Type FSA 313, 315
Type FSA, Threadless 314
Type FSC 313, 315, 317, 334
Type FSC, Explosion-Proof 333
Type FSC, Threadless 314, 316, 317
Type FSCC 313
Type FSCC, Threadless 314
Type FSCT 313
Type FSCT, Threadless 314
Type FSD 315
Type FSD, Threadless 316
Type FSDC, Explosion Proof 333
Type FSF 359
Type FSFR 359
Type FSL 313
Type FSL, Threadless 314
Type FSLA, Threadless 314
Type FSR 313
Type FSR, Threadless 314
Type FSS 313, 315, 359
Type FSS, Threadless 314
Type FST 313
Type FSX 313
Type FSX, Threadless 314
Type G 318, 320
Type G, Threadless 319, 320
Type GA 318, 320
Type GL 318, 320
Type GL, Threadless 319, 320
Type GLA 318, 320
Type GRC 357
Type GRCA 357
Type GRL 357
Type GRLA 357
Type GRT 357
Type GRX 357
Type GS 323
Type GSA 323
Type GSB 323
Type GSC 323
Type GSD 323
Type GSE 323

C Page

Condulets, Type GSL 323
Type GSS 323
Type GSSC 323
Type GST 323
Type GSX 323
Type GT 318, 320
Type GT, Threadless 319, 320
Type GTA 318
Type GU 331
Type GUAB 329
Type GUAC 329
Type GUAD 329
Type GUAF 330
Type GUAG 330
Type GUAH 330
Type GUAL 329
Type GUAM 329
Type GUAN 329
Type GUAP 330
Type GUAQ 330
Type GUAT 329
Type GUAW 329
Type GUAX 330
Type GUB 334–336
Type GUE 331
Type GUFC 330
Type GUFL 330
Type GUFT 330
Type GUFX 330
Type GUP 331
Type GX 318, 320
Type H 318, 320
Type H, Threadless 319, 320
Type HA 318, 320
Type HH 318
Type HHC 318
Type HLA 318
Type J 322
Type J, Threadless 322
Type JA 322
Type JB 322
Type JL 322
Type JRY 359
Type JT 322
Type JU 322
Type K 322
Type K, Threadless 322
Type KC 322
Type KD 322
Type KRY 359
Type KRYA 359
Type L 305
Type L, Threadless 308
Type LB 305
Type LB, Service Entrance 321
Type LB, Threadless 308
Type LBB 306
Type LBD 305
Type LBL 306
Type LBL, Threadless 308
Type LBR 306
Type LBR, Threadless 308
Type LBY, Service Entrance 321
Type LD 360
Type LDBF 360
Type LDBJ 360
Type LDJ 360
Type LEA 361
Type LEBF 361
Type LEBJ 361
Type LF 305
Type LF, Threadless 308
Type LFB 306

C Page

Condulets, Type LGUA 361
Type LGUB 361
Type LHSA 362
Type LHSJ 362
Type LHSK 362
Type LHSP 362
Type LL 305
Type LL, Threadless 308
Type LLB 306
Type LMA 362
Type LMD 362
Type LMG 362
Type LMH 362
Type LMKA 361
Type LMKB 361
Type LMKJ 361
Type LMKL 361
Type LO 357
Type LOA 357
Type LOC 357
Type LOL 357
Type LOT 357
Type LOX 357
Type LP 357
Type LPC 357
Type LR 305
Type LR, Threadless 308
Type LRB 306
Type PRC 348
Type PRT 348
Type PRX 348
Type QE 342
Type QEA 342
Type QED 342
Type QED 342
Type QEE 342
Type QEF 342
Type QEG 342
Type QEJ 342
Type QEK 342
Type QEP 342
Type RS 347
Type RSM 347
Type RSS 347
Type S 325
Type SA 325
Type SC 325
Type SK 326
Type SKC 326
Type SKL 326
Type SKT 326
Type SKX 326
Type SL 325
Type ST 325
Type SX 325
Type T 306
Type T, Threadless 308
Type TA, Threadless 308
Type TB 306
Type TB, Threadless 309
Type TL 307
Type TL, Threadless 309
Type TR 307
Type TR, Threadless 309
Type U 306
Type U, Threadless 309
Type UB 306
Type UB, Threadless 309
Type UGCD 363
Type UGEL 363
Type UGEM 363
Type UGEN 363
Type UGXD 363

C Page

Condulets, Type V 327, 328
Type VA 327, 328
Type VC 327, 328
Type VD 327, 328
Type VDA 327, 328
Type VE 327, 328
Type VF 327, 328
Type VG 327
Type VH 327
Type VHA 327
Type VHC 327
Type VHD 327
Type VHDA 327
Type VHE 327
Type VHF 327
Type VHG 327
Type VHJ 327
Type VHL 327
Type VHT 327
Type VJ 327, 328
Type VL 327, 328
Type VS 326
Type VT 327, 328
Type VX 327, 328
Type VXH 327
Type X 307
Type X, Threadless 309
Type XA 307
Type Y 348
Type YC 348
Type YK 350
Type YKC 350
Type YKW 350
Type YKWC 350
Type YS 348
Type YW 349
Type YWS 349
Type YWX 349
Type Z 349
Type ZC 349
Condulets and Receptacles, Arktite 340–342
Cone Anchors, Chance 51
Connection Blocks, Condulet 358
Blocks, Condulet, GS Series 324
Blocks, Type YE 364
Connector Bodies, Cord, Bryant 392
Bodies, Cord, Hemco 392
Condulets, Type MD 362
Condulets, Type MDA 362
Extensions, Panel, T & B 279
Connectors, Box, Flexsteel 277–279
Box, T & B 280, 281
Cable, Bryant 262
Cable, Dossert 258
Cable, Frankel 260
Cable, Ideal 262
Cable, National 107
Cable, Reliable 257
Cable, Sherman 255
Cable, T & B 256
Condulet, Threadless, Type UCA 365
Condulet, Threadless, Type UCB 366
Condulet, Type CCT 366
Cord, Appliance, R & S 418
Cord, Bryant 262
Cord, Hubbell 403, 404
Cord, Lamp, Flexsteel 278, 279
Cord, Polarized, Bryant 395
Cord, Polarized, Hubbell 405, 408
Cord, Polarized, Hubbellock 399
Cord, Twist-Lock, Hubbell 397, 398
Hose, Line, Salisbury 70

C Page

Connectors, Loom Wire 282
Pipe, Natco 102
Separable, Faraday 617
Set Screw, Sherman 253
Test, Fahnestock 263
Wire, Bryant 262
Wire, Dossert 258
Wire, Frankel 260
Wire, Ideal 262
Wire, National 263, 264
Wire, Reliable 257
Wire, Sherman 255
Wire, T & B 256
Constant Potential Rectifiers, G-E 606
Ringing Drops, Edwards 644
Control Apparatus, Remote, Street Lighting, G-E 140
Cabinets, Burglar Alarm, Faraday 643
Cable, Habirshaw 229
Cable, Trenchlay 237
Rings, Floodlight, X-Ray 563
Switches, G-E 179
Controllers, Count, Portland 618
Photoelectric, Novalux, G-E 141
Speed, Variable, Ilg 209
Controls, Automatic, Mercoid 472
Limit, Mercoid 473
Convenience Outlet Plates, H & H 441
Outlet Plates, Hubbell 412
Outlets, H & H 399, 414
Outlets, Hubbell 399, 400
Outlets, P & S-Despard 383
Outlets and Pilot Lights, Combination, Hubbell 400
Outlets and Switches, Combination, Hubbell 400
Cookers, Egg, Hankscraft 696
Everhot 688
Cookers and Waffle Irons, Combination, M-B 694
Cooking Sets, Nesco 690
Copper Oxide Battery Chargers, G-E 607
Oxide Rectifiers, G-E 607
Wire, Bare, General 239, 240
Coppers, Soldering 96
Copperweld Ground Rods, Hubbard 28
Staples, Hubbard 26
Cord, Fixture, Whitney Blake 244
Flexible, Whitney Blake 244, 245
Heater, Deltabeston 247
Heater, Whitney Blake 244
Lamp, Armored, National 277
Lamp, General 239
Lamp, Whitney Blake 244
Parallel, Whitney Blake 244
Portable, General 239
Portable, Tirex 243
Portable, Whitney Blake 244
Rubber Sheathed, Whitney Blake 244
Socket, Hubbell 379
Super Service, General 239
Cord Connector Bodies, Bryant 392
Connector Bodies, Hemco 392
Connectors, Appliance, R & S 418
Connectors, Bryant 262
Connectors, Hubbell 403, 404
Connectors, Lamp, Flexsteel 278, 279
Connectors, Polarized, Bryant 395
Connectors, Polarized, Hubbell 405, 408

C Page

Cord Connectors, Polarized, Hubbellock ... 399
Connectors, Twist-Lock, Hubbell ... 397, 398
Grips, Benjamin ... 575
Sets, Bryant ... 396
Sets, Cube-Tap, Hemco ... 416
Sets, Heater, Hemco ... 416
Sets, Plug, Heater, H & H ... 416
Sets, Range, Hubbell ... 409
Switches, Bryant ... 424
Switches, Hemco ... 416
Switches, Toggle, Hubbell ... 432
Cords, Telephone ... 663
Corner Brackets, Telephone, Hubbard ... 34
Clevises, Peirce ... 44
Plates, Peirce ... 38
Corona-Proof Cable, Habirshaw ... 228
Count Controllers, Portland ... 618
Couplings, Conduit, Combination, T & B ... 281
Conduit, Explosion-Proof ... 337
Conduit, Flexsteel ... 279
Conduit, Rigid Steel ... 271
Conduit, T & B ... 274
Cove Light Strips, Kliegl ... 589
Striplights ... 588
Cover Control Keys, Switch, Square D ... 445
Hooks, Manhole, Diamond ... 110
Covers, Box, P & S-Despard ... 384
Box, Polarized Receptacle, Bryant ... 396
Conduit, BLM Series ... 358
Conduit, BO Series ... 358
Conduit, CL Series ... 358
Conduit, Explosion-Proof ... 330
Conduit, FD Series ... 314–316
Conduit, FS Series ... 314–317
Conduit, G-H Series ... 319, 321
Conduit, GS Series ... 324
Conduit, J-K Series ... 322
Conduit, LO Series ... 358
Conduit, LP Series ... 358
Conduit, Mogul ... 312
Conduit, Obround ... 309–311
Conduit, Service Entrance, Type F ... 321
Conduit, Type RS ... 347
Conduit, Type S ... 325
Conduit, Type SK ... 326
Flush Device Box, National ... 294
Gang Box, National ... 291
Insulating, Dossert ... 258
Junction Box, T & B ... 296
Manhole ... 110
Outlet Box ... 287–291
Outlet Box, Reflector Socket, Benjamin ... 575
Reflector, Glass, Benjamin ... 581
Covers and Frames, Manhole ... 110
Crawford Ranges ... 685–687
Creosoted Pine Poles ... 14–21
Wood Conduit ... 103
Crescent Compound, Chatterton ... 252
Guards, Lamp ... 531, 532
Salts, Soldering ... 352
Soldering Sticks ... 253
Crossarm Bolts, Hubbard ... 31
Braces, Hubbard ... 33
Braces, Rainier ... 33
Clevises, Peirce ... 44

C Page

Crossarm Hardware Fittings, High Tension, Hubbard ... 41
Pins, Hubbard-OB ... 37
Reinforcing Plates, Peirce ... 31
Saddles, Peirce ... 38
Specifications, Rainier ... 24
Straps, Peirce ... 38
U-Bolts, Peirce ... 38
Crossarms, Shock Absorber, Benjamin ... 583
Steel, Hubbard ... 42
Wood, Rainier ... 24, 25
Crouse-Hinds Bases, Floodlight Projector ... 595
Beacons, Airport ... 596
Brackets, Floodlight Projector ... 595
Fixtures, Wind Cone, Airport ... 596
Floodlights ... 590–596
Indicators, Ceiling Height ... 596
Lenses, Floodlight Projector ... 595
Lighting Units, Industrial ... 593
Lights, Approach, Airport ... 597
Lights, Boundry, Airport ... 597
Lights, Obstacle, Airport ... 597
Projectors, Ceiling Height ... 596
Searchlights, Incandescent ... 592
Crow Bars, Oshkosh ... 77
Crystal Valve Arresters, Lightning ... 154
Cube-Tap Cord Sets, Hemco ... 416
Cube-Taps, Hemco ... 391
Current Taps, Acorn ... 410
Taps, H & H ... 414
Taps, Hubbell ... 410, 411
Transfer Jacks and Plugs, G-E ... 178
Transformers, Tripping, G-E 179, 180
Transformers, Weston ... 164, 165
Curtistrip ... 561, 562
Cutout Boxes, Columbia ... 488, 489
Fuse Links, G-E ... 150
Cutouts, Film, G-E ... 135
Fuse, Enclosed, D & W ... 477
Fuse, Enclosed, FA ... 477
Fuse, G-E ... 152
Fuse, Oil, D&W ... 150
Fuse, Plug, Hemco ... 474
Fuse, Transformer, G-E ... 151, 152
Pothead, Novalux, G-E ... 136
Primary, G-E ... 149
Transformer, Novalux, G-E ... 142
Cutters, Bolt, Porter ... 90
Wire, Porter ... 90

D

D-V-A-Tor Sign Fittings, Neon ... 269
D & W Cutouts, Fuse, Enclosed ... 477
Cutouts, Fuse, Oil ... 150
Fuses, Enclosed ... 478
Plug Fuse Casings ... 475
Dating Nails, Pole, Hubbard ... 30
Day-Brite Fixtures, Refrigerator ... 549
Reflectors, Bracket ... 549
Reflectors, Cashier Cage ... 550
Reflectors, Fitting Room ... 549
Reflectors, Library Stack Light ... 550
Reflectors, Pedestrian Tunnel ... 550
Reflectors, Picture ... 549
Reflectors, Show Case ... 548, 549
Reflectors, Wall Case ... 549
Signs ... 548
Day-Light Lamp Screens, Esrobert ... 550
Dead-End Brackets, Peirce ... 47

D Page

Dead-End Clevises, Klauber ... 44
Clevises, Peirce ... 44
Straps, Peirce ... 46
Dead-Ending Shackles, Hubbard ... 35
Deadman Pole Supports ... 77
Deagan Chimes, Dinner ... 637
Chimes, Door ... 637
Deck Light Condulets, LM Series ... 362
Decorative Fixtures, Domino, Graybar ... 539
Deltabeston Wire and Cable ... 247–250
Derrick Belts, Klein ... 91
Derricks, Pole, Automobile, Graybar ... 65, 66
Desk Annunciators, Edwards ... 613
Fans, Graybar ... 682, 683
Lamps, Buss ... 555
Lamps, Emeralite ... 552, 553
Lamps, Faries ... 553, 554
Lamps, Greenalite ... 553
Lamps, Mefcolite ... 553
Pushes, Edwards ... 638
Set Telephone Boxes ... 666
Telephone Stands ... 666
Detectors, High Tension, Brach ... 171
Diamond Anchors, Calking ... 94
Anchors, Drive, Hammer ... 95
Anchors, Screw ... 94
Clamps, Cable ... 265, 275
Clamps, Conduit ... 274, 275
Drills ... 95
Drills, Twist Hammer ... 95
Holders, Drill ... 95
Hooks, Cover, Manhole ... 110
Insulators, Bridle Wire ... 264
Points, Drill ... 95
Rings, Bridle ... 264
Rings, Drive ... 264
Rods, Duct ... 107
Screws, Angle ... 264
Shields, Expansion ... 93–95
Toggles ... 93
Di-En-Key Bolts, Expansion ... 93
Diffusers, Glassteel, Benjamin 567, 572
Diggers, Oshkosh ... 50
Digging Bars, Oshkosh ... 77
Spuds, Oshkosh ... 77
Dimmers ... 588
Dinkeys, Pole, Graybar ... 68
Dinner Chimes, Deagan ... 637
Directional Signs, Perlite ... 547
Disc Stoves, M-B ... 694
Disconnecting Switches, Three-E ... 155, 156
Disconnects, Fuse, Three-E ... 155
Dishes, Chafing, M-B ... 694
Display Case Reflectors, X-Ray ... 564
Di-Stampt Clamps, Conduit ... 274
Distributing Brackets, Telephone, Hubbard ... 34
Knob Racks, Peirce ... 35
Distribution Fuse Cutouts, G-E ... 151, 152
Transformers, G-E ... 143–146
Dividers, Box, P &S-Despard ... 383
Dixie Annunciators, Edwards ... 612
Domino Decorative Fixtures, Graybar ... 539
Door Chimes, Deagan ... 637
Chimes, Square D ... 637
Openers, Edwards ... 643
Step Light Switches, Graybar ... 627
Switches, Bryant ... 419

D

Page

Door Switches, Edwards 419
Switches, H & H 419
Dossert Connectors 258
Taps, Cable 259
Taps, Gutter 259
Double Arming Bolts, Hubbard ... 32
Dowel Pins, Conduit, Natco 103
Pins, Hubbard 107
Driers and Radiators, Proctor 698
Drill Holders, Diamond 95
Points, Diamond 95
Points, Peirce 96
Stands, Speedway 212
Stands, Thor 215
Drill and Saw Kits, Speedway 211
Drills, Brick, Diamond 95
Concrete, Diamond 95
Hammer, Peirce 96
Portable, Speedway 210
Portable, Thor 213–215
Stone, Diamond 95
Twist, Hammer, Diamond 95
Drink Mixers, Gilbert 702
Drip Coffee Urns, Automatic 693
Drive Anchors, Hammer, Diamond 95
Rings, Diamond 264
Drivers, Screw, Electric, Speedway 212
Screw, Electric, Thor 215
Drop Cable, Service, General 234
Cable, Service, Habirshaw 229
Fixture Bodies, Watertight, Benjamin 585
Fixtures, Watertight, Benjamin .. 584
Drops, Constant Ringing, Edwards 644
Dry Batteries, Eveready 600, 601
Dryers, Hair, Gilbert 702
Hair, Hamilton-Beach 702
Duck, Varnished 99
Duct Rods, Diamond 107
Rods, Empire 107
Shields, Cable, Hubbard 110
Dunco Relays 471
Duplex Switch Plates, Hubbell 435
Switches, Hubbell 435
Duracrome Plates, H & H 441
Dust-Proof Fixtures, Benjamin ... 579
Reflector Covers, Benjamin 581

E

E-Line Bells and Buzzers 626
E-Z Wire Strippers 89
Earth Boring Equipment, Graybar 63
Eco Fuses, Enclosed 481
Economy Conduit, Steel 270
Fuses, Enclosed 479
Fuses, Plug 475
Edison Base Adapters, Hubbell ... 411
Primary Cells 601–603
Edi-Swan Medium Base Devices .. 369
Edwards Annunciators 612–616
Bells, Burglar Alarm 628
Bells, Clapper Type 629, 630
Bells, Iron Box 626
Bells, Monitor 628
Bells, Nubel 626
Bells, Plunger Type 629
Bells, Recti 630
Bells, Single Stroke 628, 630
Bells, Skeleton 628
Bells, Vibrating Type 628
Blocks, Push Button 638

E

Page

Edwards Buzzers, Watchcase 627
Buzzers, Flush 627
Buzzers, Iron Box 626
Buzzers, Recti 630
Clamps, Table 641
Door Openers 643
Drops, Constant Ringing 644
Escutcheons, Push 639, 640
Horns and Howlers 627
Plates, Push Button 640, 641
Push Buttons 638–642
Relays, Burglar Alarm 644
Signaling Devices, Flushcall 626
Springs, Burglar Alarm 644
Stations, Ansercall 615
Stations, Fire Alarm 618
Stations, Return Call 615
Switches, Door 419
Switches, Lock, Burglar Alarm .. 644
Transformers, Bell Ringing 609
Transformers, Signaling 608
Traps, Burglar Alarm 644
Treads, Floor 641
Egg Cookers, Hankscraft 696
Elbows, Conduit, Large Radius ... 272
Conduit, R & S 295
Conduit, Rigid Steel 271
Conduit, Steeltubes 272
Condulet 366
Electricians' Knives 89
Scissors 89
Electroduct Conduit, Steel 270
Electrolier Socket Bodies, Bryant 368
Socket Caps, Bryant 368
Sockets, Bryant 369
Sockets, Hemco 368
Switches, Bryant 421
Elevator Annunciators, Edwards .. 616
Emblem Sign Reflectors, Benjamin 580
Emeralite Lamps, Machine 553
Lamps, Portable 552, 553
Shades 550
Emergency Jacks, Simplex 74
Empire Canvas, Varnished 99
Duck, Varnished 99
Paper 99
Rods, Duct 107
Tape, Varnished 99
Enameled Conduit 271
Resistor Units, G-E 200
Enclosed Fuse Cutouts, D & W ... 477
Fuse Cutouts, FA 477
Fuses, Buss 480, 481
Fuses, D & W 478
Fuses, Eco 481
Fuses, Economy 479
Fuses, Gem 484
Fuses, Jefferson 482
Fuses, Union 483, 484
Switches, Bull-Dog 451–453
Switches, Colt-Noark 453–457
Switches, Square D 443–449
Switches, Trumbull 458–460
End Bells, Cable, Three-E 106
Engineers' Reading Light Condulets, LMK Series 361
Entrance Cable, Service, General . 234
Fittings, Cable, Pothead, G & W. 106
Switches, Colt-Noark 457
Switches, Hemco 474
Erickson Couplings, Conduit 274

E

Page

Escutcheons, Push, Flush, Edwards 639, 640
Esrobert Screens, Lamp, Day-Light 550
Eveready Batteries, Dry 600, 601
Batteries, Flashlight 599
Batteries, Lantern 599
Batteries, Radio 600, 601
Candles, Electric 599
Flashlights 598, 599
Lanterns, Spotlight 599
Lights, Pocket 599
Lights, Wall 599
Everhot Casseroles 688
Combinations, Casserole-Hotplate 689
Compakts, Kitchen 689
Cookers 688
Hot Plates 688, 689
Ever-Lok Fittings, R & S 418
Everstick Anchors, Expanding 52
Excellight Searchlights, Portable .. 599
Exhaust Fans, Ilg 207
Exide Batteries, Storage 603
Exit Globes, Glass, Graybar 546
Signs, Day-Brite 548
Signs, Perlite 547
Expanding Anchors, Chance 51
Anchors, Everstick 52
Expansion Bolts, Di-En-Key 93
Bolts, Peirce 94
Shields, Diamond 93–95
Shields, Keystone 93
Shields, Peirce 96
Explosion-Proof Arktite Plugs and Receptacles 337
Fittings, Condulet 338
Fixtures, Benjamin 578
Floodlights, Crouse-Hinds 594
Junction Condulets 329–331
Lighting Fixture Condulets .. 332, 333
Panelboard Condulets 334, 335
Panelboards, Condulet 335
Pit Lights 337
Switch Condulets 333–336
Expulsion Type Switches, Bryant 421, 422
Extension Ladders, Oshkosh 80
Pieces, Fixture, T & B 273
Rings, Outlet Box 287–290
Straps, Klein 92
Extensions, Branch, Condulet, Type OCB 311
Connector, Panel, T & B 279
Floor, Combination, R & S 304
Socket, Benjamin 390
Extractors, Juice, Sunkist 702
Eye Bolts, Guy, Hubbard 31
Bolts, Hubbard 32
Nuts, Hubbard 30
Eyes, Bolt, Hubbard 30

F

FA Blocks, Fuse 477
Outlets, Fan Hanger 417
Panels and Cabinets 505–519
Switches, Knife 463–467
Terminals, Fuse 476
Fahnestock Binding Posts 263
Test Connectors 263
Faircrest Fixtures, Graybar 538
Fan Guards, Ilg 208

F Page

Fan Hanger Outlets, Bryant..... 417
Hanger Outlets, FA..... 417
Hanger Outlets, H & H..... 416
Hanger Outlets, R & S..... 417
Shutters, Ilg..... 208
Fans, Ceiling, Graybar..... 684
Desk, Graybar.....682, 683
Exhaust, Ilg..... 207
Floor, Portable, Ilgair..... 208
Ventilating, Ilg..... 207
Ventilation, Graybar.....682, 683
Faraday Annunciators..... 615
Bells, Trouble..... 634
Bells, Vibrating, Skeleton..... 635
Buzzers, Signal.....633–636
Buzzers, Special-Toned.....634, 636
Cabinets, Burglar Alarm Control 643
Call Panels, Residence.....631, 632
Connectors, Separable..... 617
Gongs, Fire Alarm..... 634
Gongs, Signal.....633–636
Gongs, Special-Toned.....634, 636
Gongs, Traffic-Signal..... 634
Interconnection-Cabinets..... 617
Interconnection-Strips..... 617
Push Buttons..... 640
Strips, Battery, Fused..... 617
Strips, Terminal..... 617
Faraday-Ekla Bells..... 635
Faries Lamps, Portable.....553, 554
Federal Bushings, Conduit..... 268
Sirens..... 621
Sockets, Clamp, Porcelain..... 390
Feeder Cable, General..... 241
Feeders, Cable, B & L..... 110
Fibre Conduit.....100–111
Rods..... 97
Sheets..... 97
Tubing..... 97
Filler Hole Lamp Condulets, LG Series..... 361
Filling Compound, Ozite..... 107
Film Cutouts, G-E..... 135
Finishes, Special, Bryant..... 429
Special, Hubbell..... 438
Finishing Flanges, X-Ray..... 559
Fir Moulding, Rainier..... 26
Fire Alarm Cable, Habirshaw..... 228
Alarm Gongs, Faraday..... 634
Alarm Howlers, Benjamin..... 624
Alarm Stations, Edwards..... 618
Alarm Systems, Industrial..... 619
Pots, Klein..... 109
Fish Tape..... 275
Tape Pullers, Klein..... 275
Fitting Room Reflectors, Day-Brite..... 549
Fittings, Brace, Trench, Simplex.. 108
Conductor, Three-E..... 157
Conduit, Rigid Steel..... 271
Conduit, Service and Fuse Box, Colt-Noark.....486, 487
Conduit, Steeltubes..... 272
Condulet, Explosion-Proof..... 338
Condulet, Service Entrance..... 321
Curtistrip.....561, 562
Entrance, Cable, Pothead, G & W 106
Ever-Lok, R & S..... 418
Fixture, Graybar..... 545
Floor Box, Fullman.....302, 303
Floor Box, T & B..... 301

F Page

Fittings, Ground, T & B..... 273
Hardware, Crossarm, High Tension, Hubbard..... 41
Loom Wire..... 282
Marine, Benjamin..... 584
Molding, Metal, National..... 283
Molding, Ovalduct..... 284
Molding, Wiremold.....285, 286
Molding, Xtensionduct..... 284
Ovalflex..... 282
Pipe, Three-E..... 157
Pothead, G & W..... 106
Sign, Neon.....268, 269
Socket, Reflector, Benjamin..... 575
Suspension, Benjamin..... 572
Suspension, Cable, Benjamin..... 583
Wiring Trough, Square-Duct.296, 297
Fixture Aligners, Benjamin..... 583
Bases, Condulet..... 358
Bodies, Watertight, Benjamin... 585
Brackets, Wall, Benjamin..... 585
Cord, Whitney Blake..... 244
Extension Pieces, T & B..... 273
Fittings, Graybar..... 545
Hanger Boxes, R & S..... 294
Hanger Condulets.....353–355
Hickeys, T & B..... 274
Receptacle Bodies, Hubbell..... 401
Receptacles, Bryant..... 392
Receptacles, Porcelain, P & S... 388
Rings, Condulet, Type UCY..... 355
Sockets, Acorn..... 378
Sockets, Benjamin..... 576
Stems, Benjamin..... 582
Studs, National..... 274
Switches, Levolier..... 425
Wire, Deltabeston..... 247
Fixtures, Amolier, Graybar..... 542
A-Type, Graybar..... 536
Benjamin, Bracket..... 579
Bracket, Benjamin..... 579
Ceiling, Adjustable, Tafco..... 555
Ceiling, Watertight, Benjamin... 584
Commercial, Graybar.....535–545
Condulet..... 358
Decorative, Domino, Graybar... 539
Drop, Watertight, Benjamin..... 584
Dust-Proof, Benjamin..... 579
Explosion-Proof, Benjamin..... 578
Faircrest, Graybar..... 538
Gas and Vaporproof, Benjamin.. 578
G-Type, Graybar..... 535
Guard, Condulet, Type GH..... 320
Guard, Condulet, Type GS..... 324
Gymnasium, Benjamin..... 581
Industrial, Graybar.....535–539
Inspection-Lite, Benjamin..... 580
Intensifier, Benjamin..... 580
Knob, Swinging, Peirce..... 50
Lighting, Fountain, R & S..... 586
Lighting, Graybar.....535–545
Lighting, Pit, Benjamin..... 566
Lighting, Porcelain, P & S..... 556
Lighting, Swimming Pool, R & S 586
Lincrest, Graybar.....535–545
Luminaire, Graybar..... 544
Moisture-Proof, Benjamin..... 579
Muralier, Graybar..... 542
Nu-Mode, Graybar Miller..... 544
Reflector, Watertight, Benjamin. 584
Refrigerator, Day-Brite..... 549
R-Type, Graybar..... 539
Shelcrest, Graybar..... 537

F Page

Fixtures, Show Case, Day-Brite.....548, 549
Silvray, Graybar.....540, 541
Stancrest, Graybar..... 538
Street Lighting, Novalux, G-E 125–135
Threaded, Benjamin..... 573
Ultra-Violet, Graybar Miller.... 543
Unit-Package, Benjamin..... 579
Vaporproof, Condulet, GS Series. 324
Vaporproof, Condulet, Industrial. 327–329
Vaporproof, Condulet, Type ARB.....326, 358
Vaporproof, R & S.....585, 586
Vapor-Seal, Benjamin..... 578
Variety-Lite, Benjamin..... 579
Vestibule, Car, Condulet, Type SRH..... 359
Wall, Watertight, Benjamin..... 584
Wall Case, Day-Brite..... 549
Watertight, Benjamin..... 584
Wind Cone, Airport, Crouse-Hinds..... 596
W-Type, Graybar..... 536
X-Type, Graybar..... 535
Flags, Metal, Oshkosh..... 79
Flanges, Finishing, X-Ray..... 559
Flashers, Sign, Leland..... 528
Flashlight Batteries, Eveready... 599
Flashlights, Eveready.....598, 599
Flat Irons, American Beauty..697, 698
Marion..... 697
Proctor..... 697
Sunbeam..... 697
Flexible Cable, Habirshaw..... 230
Conduit, Flexsteel..... 277
Conduit, Non-Metallic, Flextube..... 282
Cord, Whitney Blake.....244, 245
Strand Cable, Deltabeston..... 248
Flexsteel Armored Cable..... 277
Conduit..... 277
Connectors, Box.....277–279
Connectors, Lamp Cord.....278, 279
Couplings, Conduit..... 279
Nipples, Reducing..... 279
Flextube Conduit, Non-Metallic.. 282
Float Switches, G-E..... 198
Floodlight Control Rings, X-Ray. 563
Lenses, Crouse-Hinds..... 595
Projector Bases, Crouse-Hinds... 595
Projector Brackets, Crouse-Hinds 595
Floodlights, Airport, Crouse-Hinds 596
Benjamin.....565, 566
Crouse-Hinds.....590–596
Explosion-Proof, Crouse-Hinds.. 594
Interior, X-Ray..... 563
Lantern, Crouse-Hinds..... 593
Underwater, Crouse-Hinds..... 591
Floor Boxes, Fullman 301–303
Boxes, R & S..... 304
Boxes, Steel City..... 301
Boxes, T & B..... 301
Extensions, Combination, R & S. 304
Fans, Portable, Ilgair..... 208
Junction Boxes, Nepcoduct..... 298
Lamps, Faries..... 554
Outlets, Fullman.....301–303
Outlets, R & S.....295, 304
Outlets, Steel City..... 301
Outlets, T & B..... 301
Pockets, Century..... 588

F Page

Floor Pushes, Edwards..... 641
Receptacles and Boxes, Steel City 301
Treads, Edwards..... 641
Wiring Systems, Under, Nepcoduct.....298–300
Flush Cabinets, Columbia..... 489
Device Boxes, National..... 294
Plate Finishes, Bryant..... 429
Plate Sections, Bryant.....430, 431
Plates, Blank, Hubbell..... 412
Plates, Bryant.....427, 428
Plates, Combination, Hubbell... 413
Plates, Convenience Outlet, Hubbell..... 412
Plates, H & H..... 441
Plates, Hemco..... 427
Plates, Hubbell..... 437
Plates, P & S-Despard.....384, 385
Plates, Pilot Light and Receptacle, Bryant..... 394
Plates, Pilot Light and Switch, Bryant..... 394
Plates, Polarized Receptacle, Bryant..... 396
Plates, Radio Outlet, Hubbell... 436
Plates, Receptacle, Radio, Hubbell..... 400
Plates, Receptacle and Pilot Light, Bryant..... 394
Plates, Special, Hubbell..... 413
Plates, Switch, Duplex, Hubbell. 435
Plates, Switch, Push, Hubbell... 436
Plates, Switch, Toggle, Hubbell.. 436
Plates, Switch, Triplex, Hubbell. 435
Plates, Switch, Uniplex, Hubbell. 434
Plates, Switch and Pilot Light, Bryant..... 394
Plates, Telephone, Hubbell..... 412
Plates, Telephone Outlet, Hubbell..... 436
Push Escutcheons, Edwards.639, 640
Receptacles, Acorn..... 399
Receptacles, Bryant.....393, 394
Receptacles, Hemco..... 393
Receptacles, Hubbell..... 400
Receptacles, Pilot Light, Hubbell 411
Receptacles, Polarized, Hubbell 405–410
Receptacles, Radio, Hubbell..... 400
Switches, Duplex, Hubbell..... 435
Switches, Push, H & H..... 439
Switches, Push Button, Hubbell. 434
Switches, Time-Saver, H & H... 440
Switches, Toggle, Hubbell....433–435
Switches, Triplex, Hubbell..... 435
Switches, Tumbler, Bryant.425, 426
Switches, Tumbler, H & H..... 440
Switches, Uniplex, Hubbell..... 434
Flushcall Signaling Devices, Edwards..... 626
Folding Barricades, Oshkosh..... 79
Food Mixers, Hamilton-Beach.... 701
Mixers, Mixmasters..... 701
Foot-Candle Meters, Weston..... 166
Footlights, Century..... 588
Kliegl..... 589
Show Window, X-Ray..... 564
Forks, Insulated, Hubbard..... 35
Fountain Lighting Fixtures, R & S 586
Frames, Manhole..... 110
Pulling-In, Cable, B & L..... 110
Frames and Covers, Manhole..... 110
Frankel Connectors..... 260

F Page

Frankel Taps, Cable..... 261
Taps, Gutter..... 261
Friction Tape..... 252
Fullman Boxes, Floor.....301–303
Outlets, Floor.....301–303
Furnaces, Klein..... 109
Fuse Boxes, Colt-Noark..... 485
Cabinets, Combination, Colt-Noark..... 457
Cabinets, Square D..... 490
Casings, Plug, D & W..... 475
Clips, Square D..... 476
Cutouts, Enclosed, D & W..... 477
Cutouts, Enclosed, FA..... 477
Cutouts, G-E..... 152
Cutouts, Oil, D & W..... 150
Cutouts, Plug, Hemco..... 474
Cutouts, Transformer, G-E..151, 152
Disconnects, Three-E..... 155
Links, Cutout, G-E..... 150
Pullers, Ideal..... 481
Terminals, FA..... 476
Wire, Tested..... 476
Fused Battery Strips, Faraday.... 617
Fuseless Plugs, Bryant..... 474
Fusenters, Safety, Bull-Dog..... 490
Fuses, Enclosed, Buss.....480, 481
Enclosed, D & W..... 478
Enclosed, Eco..... 481
Enclosed, Economy..... 479
Enclosed, Gem..... 484
Enclosed, Jefferson..... 482
Enclosed, Union.....483, 484
Plug, Bryant..... 474
Plug, Buss..... 475
Plug, Clearsite..... 475
Plug, Economy..... 475
Plug, Hemco..... 474
Plug, Jefferson..... 474
Tubular, Western Electric..... 664
Fusetrons, Buss..... 475

G

G-E Arresters, Lightning.....152, 153
Arresters, Lightning, Pellet..... 139
Boxes, Junction, Transformer... 148
Brackets, Street Lighting, Novalux..... 134
Brackets, Transformer..... 148
Breakers, Circuit.....173–177
Bulbs, Tungar..... 607
Chargers, Battery.....605–607
Compensators, Motor Starting 195, 196
Controllers, Photoelectric, Novalux..... 141
Cutouts, Film..... 135
Cutouts, Fuse..... 152
Cutouts, Fuse, Oil..... 150
Cutouts, Fuse, Transformer..151, 152
Cutouts, Pothead, Novalux..... 136
Cutouts, Primary..... 149
Cutouts, Transformer, Novalux.. 142
Fixtures, Street Lighting, Novalux.....125–135
Glassware, Street Lighting...132, 133
Glue Pots..... 222
Hangers, Street Lighting, Novalux..... 134
Heaters, Air, Industrial..... 218
Heaters, Immersion..... 218
Heaters, Motor Starting Switch.. 194

G Page

G-E Heaters, Strip..... 218
Irons, Soldering..... 217
Jacks and Plugs, Transfer, Current..... 178
Lamps, Mazda.....523–527
Lamps, Receptacle and Resistor Indicating..... 179
Light Sources..... 199
Links, Fuse, Cutout..... 150
Luminaires, Ornamental, Novalux.....125–127
Luminaires, Suspension, Novalux 128–131
Meters, Time, Electric..... 160
Meters, Watthour.....158–160
Motor-Generator Sets..... 193
Motors, Alternating Current.181–192
Motors, Direct Current 180, 186, 187, 192
Motors, Gear.....186, 187
Motors, Series Wound..... 193
Motors, Special Service..... 193
Motors, Synchronous.....188, 189
Panels, Circuit, Breaker, Transformer..... 137
Panels, Plug Switch, Transformer..... 137
Protectors, Transformer..... 140
Receptacles, Street Lighting..... 135
Rectifiers, Constant Potential... 606
Rectifiers, Copper Oxide..... 607
Refractors, Holophane..... 124
Relays, Photoelectric..... 199
Relays, Time, Induction..... 177
Relays, Transformer..... 178
Remote Control Apparatus, Street Lighting..... 140
Resistor Units, Enameled..... 200
Rheostats, Motor Starting...194, 197
Sockets, Street Lighting..... 135
Stations, Push Button..... 201
Switches, Control..... 179
Switches, Float..... 198
Switches, Instrument..... 179
Switches, Magnetic.....195, 196
Switches, Motor Starting 193, 194, 197
Switches, Pressure..... 198
Switches, Vacuum..... 198
Switchgear.....173–179
Thrustors..... 200
Transformers, Air-Cooled....146–149
Transformers, Auto.....146, 147, 149
Transformers, Boosting..... 147
Transformers, Distribution...143–146
Transformers, Phase-Changing.. 147
Transformers, Service.....148, 149
Transformers, Sign-Lighting..... 149
Transformers, Street Lighting 136–142
Transformers, Tripping Current 179, 180
Valves, Solenoid-Operated..... 201
G-Type Fixtures, Graybar..... 535
G & W Fittings, Cable Entrance.. 106
Potheads..... 105
Gains, Pole, Presteel, Peirce..... 31
Galvanometers, Students', Weston..... 171
Weston..... 170
Gang Boxes, National..... 291
Gas Tube Neonlite Cable, Whitney Blake..... 245

G Page

Gas and Vaporproof Fixtures, Benjamin ... 578
Gaskets, Condulet, Obround Series ... 365
Gasoline Pump Condulets, Explosion-Proof ... 333
Gauge Lamp Condulets, Type LG. 360
Gear Motors, G-E ... 186, 187
Gelatin Sheets, Color, X-Ray ... 560
Gem Fuses, Enclosed ... 484
General Cable, Trenchlay ... 235–237
Cable Splicing and Jointing Materials ... 107
Cable Terminals ... 104
Service Switches, Bull-Dog ... 453
Service Switches, Square D ... 446
Wire and Cable ... 231–241
Generator-Motor Sets, G-E ... 193
Generators, Telephone, Western Electric ... 664
Gilbert Dryers, Hair ... 702
Extractors, Juice ... 702
Humidifiers ... 700
Mixers, Drink ... 702
Vibrators, Massage ... 702
Glass Coffee Makers, Silex ... 692, 693
Coffee Makers, Sunbeam ... 693
Globes, Graybar ... 533, 534
Globes, Screw Type, R & S ... 586
Insulators, Hemingray ... 53, 54
Insulators, W.T. ... 54
Reflector Covers, Benjamin ... 581
Reflectors, Emeralite ... 550
Reflectors, Greenalite ... 550
Glassteel Diffusers, Benjamin ... 567, 572
Glassware, Graybar ... 546
Street Lighting, G-E ... 132, 133
Gleason Reels ... 251
Globe Holding Rings, Watertight, Benjamin ... 585
Globes, Ball, Street Lighting ... 124
Glass, Graybar ... 546
Glass, Screw Type, R & S ... 586
Lamp, Watertight, Benjamin ... 584
Lighting, Graybar ... 533, 534
Screw, Watertight, Benjamin ... 584
Glove Bags, Linemen's, Salisbury ... 70
Pouches, Klein ... 89
Gloves, Linemen's, Rubber, Salisbury ... 72
Protector, Linemen's, Salisbury ... 72
Glue Pots, American Beauty ... 222
Pots, G-E ... 222
Goosenecks, Benjamin ... 582
Gongs, Fire Alarm, Faraday ... 634
Signal, Faraday ... 633–636
Special-Toned, Faraday ... 634, 636
Traffic-Signal, Faraday ... 634
Graybar Bells, Combination ... 627
Boxes, Mail ... 652
Buzzers, Bus Signal ... 627
Cable, Interphone ... 653, 654
Carts, Cable Splicers' ... 69
Cleaners, Vacuum ... 681
Derricks ... 65, 66
Dinkeys, Pole ... 68
Earth Boring Equipment ... 63
Fans ... 682–684
Fixtures, Lighting ... 535–545
Glassware ... 546
Globes, Lighting ... 533, 534
Hammers, Linemen's ... 93
Inter-Phones ... 645–654

G Page

Graybar Lamps, Incandescent, Silvray Processed ... 541
Lighting Accessories ... 545
Plates, Push Button, Vestibule ... 652
Power Take-Offs ... 67
Push Buttons, Bus Signal ... 627
Reels, Power ... 68
Sewing Machines ... 679, 680
Sure-Binders ... 69
Switches, Pull Cord ... 627
Switches, Step Light ... 627
Trailers ... 68–70
Washers, Clothes ... 677
Winches ... 64, 65, 67
Greenalite Lamp Screens, Esrobert ... 550
Lamps, Machine ... 553
Lamps, Portable ... 553
Shades ... 550
Greenlee Pushers, Pipe ... 108
Grinder Stands, Thor ... 216
Grinders, Bench, Speedway ... 212
Bench, Thor ... 215
Portable, Thor ... 215
Tool Post, Speedway ... 212
Gripon Guards, Lamp ... 530
Grips, Cable, Reliable ... 109
Cord, Benjamin ... 575
Wire, Haven ... 86
Wire, Klein ... 85
Ground Bushings, T & B ... 273
Clamps, Sherman ... 273
Clamps, Reliable ... 274
Fittings, T & B ... 273
Rod Clamps, Hubbard ... 28
Rod Molds, Hubbard ... 28
Rods, Hubbard ... 28
Grounding Cable, General ... 238
Straps, Receptacle, Bryant ... 396
Wedge Lugs, T & B ... 273
Groundulets ... 356
Guard Fixtures, Condulet, Type GH ... 320
Fixtures, Condulet, Type GS ... 324
Guards, Cable, Hubbard ... 26
Ceiling, Benjamin ... 582
Fan, Ilg ... 208
Lamp, Crescent ... 531, 532
Lamp, Gripon ... 530
Lamp, Hubbell ... 529
Lamp, Loxon ... 530
Lamp, Morse ... 530, 531
Lamp, Portable ... 531, 532
Lamp, Protector O ... 530
Lamp, Watertight, Benjamin ... 585
Manhole ... 110
Pike Hole, Oshkosh ... 76
Wire, Guy, Rainier ... 27
Wire, Tree, Spaulding ... 27
Guest Announcers, Square D ... 637
Guides, Cable, Aerial ... 83
Guides and Straighteners, Cable, Aerial ... 83
Guns, Spray, Saylor-Beall ... 207
Gutter Taps, Dossert ... 259
Taps, Frankel ... 261
Guy Anchors, Chance ... 51
Anchors, Hubbard ... 52
Anchors, Never-Creep ... 51
Bolts, Hubbard ... 52
Clamps, Hubbard ... 29
Hooks, Hubbard ... 29
Shims, Hubbard ... 29

G Page

Guy Strain Insulators, Porcelain, Thomas ... 55
Thimbles, Hubbard ... 52
Wire, Galvanized ... 50
Wire Guards, Rainier ... 27
Wire Protectors, Hubbard ... 27
Wire Servisleevs ... 29
Guyeye Bolts, Hubbard ... 31
Nuts, Hubbard ... 30
Guying Washers, Hubbard ... 30
Gymnasium Fixtures, Benjamin ... 581

H

H & H Convenience Outlets ... 399, 414
Cord Sets, Heater Plug ... 416
House Number Units, Illuminated ... 415
Lights, Warning ... 414
Outlets, Clock Hanger ... 416
Outlets, Fan Hanger ... 416
Plates, Flush ... 441
Plug Caps, Attachment ... 414
Plugs, Attachment ... 414
Plugs, Heater ... 416
Radio Outlets ... 415
Receptacles, Cleat ... 390
Receptacles and Bull's Eyes, Combination ... 414
Switches, Door ... 419
Switches, Pull, Canopy ... 442
Switches, Push, Flush ... 439
Switches, Snap, Surface ... 439
Switches, Time-Saver, Flush ... 440
Switches, Tumbler, Flush ... 440
Switches, Tumbler, Surface ... 439
Switches and Receptacles, Combination ... 414, 415
Switches and Warning Lights, Combination ... 414, 415
Taps, Current ... 414
Habirshaw Wire and Cable ... 223–230
Hair Dryers, Gilbert ... 702
Dryers, Hamilton-Beach ... 702
Half Reflectors, Benjamin ... 583
Hamilton-Beach Applicators, Vibrator ... 699
Dryers, Hair ... 702
Lights, Night ... 527
Mixers, Food ... 701
Motors, Sewing Machine ... 680
Vibrators ... 700
Hammer Drills, Peirce ... 96
Drive Anchors, Diamond ... 95
Twist Drills, Diamond ... 95
Hammers, Linemen's, Graybar ... 93
Portable, Speedway ... 211
Portable, Thor ... 216
Hand Chucks, Peirce ... 96
Lines, Aerial ... 83
Lines, Klein ... 86
Portable Lamps ... 531, 532
Sets, Telephone ... 665
Handles, Cant Hook ... 76
Carrying Hook ... 76
Lug Hook ... 76
Pike Pole, Oshkosh ... 76
Switch, Heater, Bryant ... 424
Switch, Rotary, Bryant ... 424
Hanger Boxes, Fixture, R & S ... 294
Condulets, Fixture ... 353–355
Outlets, Clock, H & H ... 416
Outlets, Clock, Hubbell ... 417

H Page

Hanger Outlets, Fan, Bryant..... 417
Outlets, Fan, FA..... 417
Outlets, Fan, H & H..... 416
Outlets, Fan, R & S..... 417
Hangers, Box, Outlet..... 295
Cable, Marline, National..... 265
Conduit, T & B..... 275
Curtistrip..... 562
Hand Set, Telephone..... 665
Lamp, Peirce..... 46
Lamp-Maintenance, Thompson.. 587
Pipe, Wedgtite..... 276
Street Lighting, Novalux, G-E... 134
Hankscraft Cookers, Egg..... 696
Warmers, Bottle..... 696
Hardware Fittings, Crossarm, High Tension, Hubbard..... 41
Harnesses, Safety, Linemen's..... 92
Haven Grips, Wire..... 86
Headlight Switch Condulets, LHS Series..... 362
Wire, Habirshaw..... 229
Heat and Light Applicators, Thermolite..... 554
Heater Cord, Deltabeston..... 247
Cord, Whitney Blake..... 244
Cord Sets, Hemco..... 416
Plug Cord Sets, H & H..... 416
Plugs, H & H..... 416
Switch Handles, Bryant..... 424
Switches, Surface, Bryant..... 423
Units, Switch Condulet..... 336
Heaters, Air, Arvin..... 698
Air, Chromalox.....221, 222
Air, Industrial, G-E..... 218
Air, M-B..... 698
Immersion, Chromalox..... 220
Immersion, G-E..... 218
Motor Starting Switch, G-E..... 194
Strip, G-E..... 218
Strip, Chromalox..... 219
Heating Blankets, Hewitt..... 699
Pads, Hewitt..... 699
Pads, M-B..... 699
Hegemite Plates, H & H..... 441
Hemco Cord Connector Bodies.... 392
Cord Sets, Cube-Tap..... 416
Cord Sets, Heater..... 416
Cutouts, Fuse, Plug..... 474
Fuses, Plug..... 474
Plates, Switch..... 427
Plug Bodies..... 391
Plug Caps..... 391
Plugs, Appliance..... 416
Plugs, Multiple Outlet..... 391
Receptacles, Cleat, Porcelain.... 375
Receptacles, Flush..... 393
Receptacles, Outlet Box..... 393
Receptacles, Sign, Porcelain..... 375
Sockets..... 368
Sockets, Weatherproof..... 374
Switches, Cord..... 416
Switches, Entrance..... 474
Switches, Pendent..... 423
Switches, Tumbler, Surface..... 423
Hemingray Insulators, Glass....53, 54
Hewitt Blankets, Heating..... 699
Blankets, Sweat..... 699
Pads, Heating..... 699
Hewlett Insulators, Link Type, Thomas..... 61
Hickeys, Conduit, T & B..... 276
Fixture, T & B..... 274

H Page

Hickeys, Steeltubes..... 276
High Tension Crossarm Hardware Fittings, Hubbard..... 41
Tension Detectors, Brach..... 171
Voltage Cable, General..... 238
Voltage Indicators, Neon, Brach. 171
Hoists, Chain, B & L..... 82
Jack, Compressed Air, Joyce.... 75
Holder Assemblies, Lamp, Reflector, Benjamin..... 570
Holders, Ceiling Band, Graybar... 545
Christmas Tree..... 529
Drill, Diamond..... 95
Drill, Twist, Hammer, Diamond. 95
Reflector, Benjamin..... 577
Reflector, Condulet..... 358
Shade, Benco..... 389
Shade, Bryant..... 390
Shade, Hubbell..... 391
Shade, Shurlok, P & S..... 388
Wire, Peirce..... 47
Holophane Refractors, G-E..... 124
Holsters, Plier, Klein..... 88
Hoods, Insulator, Rubber, Salisbury..... 71
Reflector, Benjamin.....570, 576
Threaded, Benjamin.....573, 574
Hook Handles, Cant..... 76
Handles, Carrying..... 76
Handles, Lug..... 76
Hooks, Booster, Cable, Aerial.... 83
Brush, Oshkosh..... 79
C. Cable, Aerial..... 83
Cant, Oshkosh..... 76
Carrying, Oshkosh..... 76
Cover, Manhole, Diamond..... 110
Guy, Hubbard..... 29
Linemen's..... 90
Lug, Oshkosh..... 76
Pintle, Trailer..... 70
Hope Sleeving..... 97
Tape..... 97
Webbing..... 97
Horns, Industrial, Klaxon..... 625
Marine, Klaxon..... 625
Hose, Line, Salisbury..... 70
Hospital Signaling Systems..... 620
Hot Plate-Casserole Combinations, Everhot..... 689
Plates, Everhot.....688, 689
Plates, Proctor..... 690
House Cable, Rubber Covered, Habirshaw..... 225
Number Units, Illuminated, H & H..... 415
Racks, Peirce..... 45
Wire, Rubber Covered, Habirshaw..... 225
Housings, Condulet, Receptacle, Type BRD..... 315
Condulet, Receptacle, Type BRG 325
Condulet, Receptacle, Type QE.....343, 344
Condulet, Switch, Type QE..343, 344
Condulet, Type BRY..... 349
Housings and Receptacles, Arktite.....340–342
Howes Wire Tools..... 86
Howlers, Fire Alarm, Benjamin... 624
Industrial, Benjamin.....622, 623
Industrial, Edwards..... 621
Hub Plates, Conduit, FA Series... 352
Plates, Conduit, MF Series..... 352

H Page

Hub Plates, Conduit, MK Series.. 352
Plates, Conduit, RSMP Series... 347
Plates, Conduit, RSP Series..... 347
Plates, Conduit, YYP Series.... 352
Hubbard Anchors, Guy..... 52
Anchors, Steelwing..... 52
Anchors, Swamp..... 52
Arms, Mast..... 49
Bands, Pole..... 50
Bands, Reinforcing, Pole..... 29
Bolts, Carriage..... 32
Bolts, Crossarm..... 31
Bolts, Double Arming..... 32
Bolts, Eye..... 32
Bolts, Guy..... 52
Bolts, Guyeye..... 31
Bolts, Machine..... 31
Bolts, Telephone Bracket..... 34
Braces, Alley..... 33
Braces, Crossarm..... 33
Brackets, Corner, Telephone.... 34
Brackets, Distributing, Telephone..... 34
Brackets, Lamp Lead..... 48
Brackets, Street Hood.....48, 49
Clamps, Cable Suspension..... 34
Clamps, Ground Rod..... 28
Clamps, Guy..... 29
Clamps, Span..... 35
Clevises, Insulator, Strain. 41, 43, 44
Clips, Wire Rope..... 29
Crossarms, Steel..... 42
Eyes, Bolt..... 30
Forks, Insulated..... 35
Guards, U-Cable..... 26
Hooks, Guy..... 29
Insulators, Primary Lead..... 37
Irons, Pulling-In, Manhole..... 111
Irons, Ridge..... 40
Knobs, Telephone Bracket..... 34
Ladders, Manhole..... 111
Markers, Pole..... 36
Molds, Ground Rod..... 28
Nails, Dating, Pole..... 36
Nuts, Eye..... 30
Nuts, Guyeye..... 30
Pins, Dowel..... 107
Pins, Insulator, Western Union.. 36
Pins, Insulator, Wood Top..... 36
Plates, Pole..... 48
Plates, Strain..... 29
Protectors, Guy Wire..... 27
Racks, Cable..... 111
Rods, Anchor..... 28
Rods, Ground..... 28
Screws, Lag..... 32
Servisleevs..... 29
Shackles, Dead-Ending..... 35
Shields, Duct, Cable..... 110
Shims, Guy..... 29
Staples, Copperweld..... 26
Steps, Pole..... 30
Straps, Cable Guard..... 26
Straps, Conduit..... 26
Straps, Reinforcing..... 34
Straps, Wall..... 29
Thimbles, Guy..... 52
Turnbuckles..... 35
Washers, Guying..... 30
Washers, Lock..... 38
Washers, Round..... 31
Washers, Square..... 31
Washers, Stubbing, Pole..... 30

H Page

Hubbard-OB Insulators, Strain... 42
Pins, Crossarm... 37
Hubbell Adapters, Edison Base... 411
Adapters, Plug... 405
Adapters, Polarized Receptacle.. 411
Attachment Plug Caps, Twist Lock... 397, 398
Attachments, Pull Socket... 390
Bull's Eyes... 411
Connectors, Cord... 403, 404
Connectors, Cord, Polarized.. 405, 408
Convenience Outlets... 399, 400
Convenience Outlets and Pilot Lights, Combination... 400
Convenience Outlets and Switches, Combination... 400
Cord Sets, Range... 409
Finishes, Special... 438
Guards, Lamp... 529
Jewels, Bull's Eye... 411
Outlets, Clock Hanger... 417
Plates, Blank... 412, 436
Plates, Combination... 413
Plates, Convenience Outlet... 412
Plates, Flush... 437
Plates, Radio Outlet... 436
Plates, Receptacle, Radio... 400
Plates, Special... 413
Plates, Switch, Duplex... 435
Plates, Switch, Push... 436
Plates, Switch, Toggle... 436
Plates, Switch, Triplex... 435
Plates, Switch, Uniplex... 434
Plates, Telephone... 412
Plates, Telephone Outlet... 436
Plug Caps, Attachment... 402, 405
Plug Caps, Attachment, Polarized... 403, 405–410
Plugs, Attachment... 401
Plugs, Motor... 404
Plugs, Motor, Polarized... 408
Plugs, Motor, Twist-Lock... 397, 398
Receptacle Bodies, Fixture... 401
Receptacles, Ceiling, Porcelain... 380, 381
Receptacles, Cleat, Mogul... 382
Receptacles, Cleat, Porcelain.. 380, 381
Receptacles, Flush... 400
Receptacles, Mogul... 382
Receptacles, Outlet Box... 381
Receptacles, Pilot Light... 411
Receptacles, Polarized... 405–410
Receptacles, Radio... 400
Receptacles, Range... 409
Receptacles, Sign, Porcelain.. 381, 382
Receptacles, Twist-Lock... 397, 398
Receptacles, Wall, Porcelain... 401
Receptacles, Weatherproof... 381, 401
Reflectors... 551
Screws, Plate, Bakelite... 413
Shade Holders... 391
Socket Bases... 377, 378
Socket Bases, Porcelain... 380
Socket Bodies... 377, 378
Socket Bodies, Porcelain... 380
Socket Bushings... 390
Socket Caps... 377, 378
Socket Caps, Porcelain... 380
Socket Chain... 379
Socket Chain Acorns... 379
Socket Chain Insulating Links... 379
Socket Chain Insulators... 379
Socket Chain Splicing Links... 379

H Page

Hubbell Socket Chain Tassels... 379
Socket Cord... 379
Socket Parts... 378
Sockets, Candelabra... 379
Sockets, Candle... 379
Sockets, Lamp Base... 411
Sockets, Mogul... 382
Sockets, Porcelain... 380
Sockets, Standard... 377
Sockets, Threaded-Catch... 378
Sockets, Wall, Pony... 379
Sockets, Weatherproof... 380, 382
Switch Bodies... 377
Switches, Appliance, Toggle... 432
Switches, Cord, Toggle... 432
Switches, Duplex... 435
Switches, Pull... 432
Switches, Push Button, Flush... 434
Switches, Rotary, Surface... 432
Switches, Toggle, Flush... 433–435
Switches, Toggle, Surface... 432
Switches, Triplex... 435
Switches, Uniplex... 434
Switches and Bull's Eyes, Combination... 400
Taps, Current... 410, 411
Taps, Table... 411
Te-Taps... 410, 411
Hubbellock Approved Industrial Devices... 399
Humidifiers, Gilbert... 700
Hydraulic Pipe Pushers, Greenlee. 108
Hydro-Proof Tape... 252

I

Ideal Connectors, Wire... 262
Pullers, Fuse... 481
Strippers, Wire... 89
Ignition Cable, Whitney Blake... 245
Transformers, Oil Burner, Jefferson... 610
Ilg Blowers, Volume... 208
Controllers, Variable Speed... 209
Fans, Ventilating... 207
Guards, Fan... 208
Shutters, Fan... 208
Ventilators, Roof... 208
Ilgair Fans, Floor, Portable... 208
Ventilators... 209
Illuminated House Number Units, H & H... 415
Illumination Meters, Weston... 166
Immersion Heaters, Chromalox.. 220
Heaters, G-E... 218
Incandescent Lamps, Silvray Processed, Graybar... 541
Searchlights, Crouse-Hinds... 592
Spotlights, Kliegl... 589
Indicating Lamps, Receptacle and Resistor, G-E... 179
Indicators, Ceiling Height, Crouse-Hinds... 596
High Voltage, Neon, Brach... 171
Tank, Patterson... 625
Indoor Meter Boxes, Square D... 448
Induction Time Relays, G-E... 177
Industrial Air Heaters, G-E... 218
Buzzers, Benjamin... 624
Devices, Hubbellock Approved.. 399
Fire Alarm Systems... 619
Fixtures, Graybar... 535–539

I Page

Industrial Fixtures, Vaporproof, Condulet... 327–329
Horns, Klaxon... 625
Jacks, Simplex... 75
Lighting Units, Crouse-Hinds... 593
Receptacles, Bryant... 371
Reflectors, Silvray, Graybar... 541
Signals, Benjamin... 622, 623
Signals, Edwards... 621
Switches, Square D... 443–446
Inspection-Lites, Benjamin... 580
Inspectors' Tool Kits, Klein... 89
Instrument Switches, G-E... 179
Instruments, Panel, Weston... 170
Portable, Weston... 161–166
Switchboard, Weston... 166–169
Insulated Clevises, Peirce... 44
Forks, Hubbard... 35
Staples, Blake... 265
Insulating Covers, Dossert... 258
Links, Bryant... 370
Links, Chain, Socket, Hubbell... 379
Stools, Salisbury... 72
Insulator Clevises, Strain, Hubbard... 41, 43, 44
Hoods, Rubber, Salisbury... 71
Pins, Broad Base, Peirce... 37
Pins, Corner, Peirce... 37
Pins, Lag Screw, Peirce... 37
Pins, Long Shank, Peirce... 36
Pins, Pole Top, Peirce... 40, 41
Pins, Railway Feeder, Peirce... 36
Pins, Short Shank, Peirce... 36
Pins, Transformer, Peirce... 37
Pins, Western Union, Hubbard.. 36
Pins, Wood Top, Hubbard... 36
Supports, Three-E... 157
Supports, Universal... 268
Insulators, Bridle Wire, Diamond. 264
Chain, Socket, Hubbell... 379
Glass, Hemingray... 53, 54
Glass, W. T... 54
Hewlett, Link Type, Thomas... 61
Porcelain, Split... 266
Porcelain, Thomas... 54–61, 266
Primary Lead, Hubbard... 37
Rack, Cable, Peirce... 111
Screw, Knob, Telephone, Peirce.. 34
Secondary Rack, Peirce... 45
Strain, Hubbard-OB... 42
Strain, Peirce... 42
Strain, Porcelain, Thomas... 55, 60
Telephone, Porcelain, Thomas... 54
Intensifiers, Benjamin... 580
Interconnection-Cabinets, Faraday... 617
Interconnection-Strips, Faraday... 617
Interior Floodlights, X-Ray... 563
Intermediate Receptacles, P & S. 388
Sockets, Bryant... 371
Inter-Phone Accessories, Graybar. 652
Cable, Graybar... 653, 654
Cable, Whitney Blake... 654
Switchboards, Graybar... 653
Inter-Phones, Apartment House, Graybar... 651, 652
Graybar... 645–654
Iron Box Bells, Edwards... 626
Buzzers, Edwards... 626
Ironers, Electric, Apex... 678
Irons, Flat, American Beauty.. 697, 698
Flat, Marion... 697

I

Page

Irons, Flat, Proctor 697
Flat, Sunbeam 697
Pressing, American Beauty 698
Pulling-In, Manhole, Hubbard ... 111
Ridge, Hubbard 40
Soldering, American Beauty 217
Soldering, G-E 217
Soldering, Vulcan 217
Waffle, M-B 695
Waffle, Proctor 695
Waffle, Wafflemaster 696
Waffle, Waffle-Witch 695
Isolators, Telescoping, Three-E ... 157

J

Jack Hoists, Compressed Air, Joyce 75
Jacks, Cable, Simplex 73
Car, Simplex 75
Emergency, Simplex 74
Industrial, Simplex 75
Mine, Simplex 75
Pole Pulling, Simplex 73
Pulling, Pole, Simplex 73
Pushing, Pipe, Simplex 108
Ratchet, Simplex 74, 75
Reel, Cable, Simplex 73, 74
Slack Puller, Simplex 73
Telephone 666
Track, Simplex 74, 75
Jacks and Plugs, Transfer, Current, G-E 178
Transfer, Potential, G-E 178
Jefferson Fuses, Enclosed 482
Fuses, Plug 474
Transformers, Bell Ringing 608
Transformers, Double Wound ... 611
Transformers, Ignition, Oil Burner 610
Transformers, Low Voltage 608
Transformers, Railway 611
Transformers, Sign, Luminous Tube 609, 610
Transformers, Signaling 608
Transformers, Toy 608
Jewels, Bull's Eye, Bryant 395
Bull's Eye, Hubbell 411
Watthour Meter, G-E 160
Joint Tape, Conduit, Natco 103
Jointing and Splicing Materials, Cable, General 107, 240
Joyce Hoists, Jack, Compressed Air 75
Juice Extractors, Sunkist 702
Jumpers, Groundulet 356
Junction Boxes, Columbia 488, 489
Boxes, Floor, Nepcoduct 298
Boxes, T & B 295, 296
Boxes, Transformer, G-E 148
Condulets, Explosion-Proof ... 329–331
Condulets, GR Series 357
Condulets, PR Series 348

K

Kappa Switches, Knife, Trumbull . 466
Keys, Cover Control, Switch, Square D 445
Socket, Bryant 367
Switch, Bryant 424
Keystone Shields, Expansion 93
Kicker Arms, Rainier 26

K

Page

Kick-Out and Clutch Attachments, Thor 216
Kiley Truck Bodies 62
King Standards, Street Lighting 120–123
Kirkland Bulls-I-Plaques 616
Bulls-I-Units 616
Kitchen Compakts, Everhot 689
Ranges, Crawford 685–687
Ventilators, Ilgair 209
Kits, Drill and Saw, Speedway 211
Tool, Klein 89
Klauber Clevises, Dead End 44
Klaxon Horns 625
Klein Bags, Tool 91
Belts, Derrick 91
Belts, Tool 91
Blocks, Troublemen's 86
Cases, Tool 89
Clamps, Splicing 84
Clamps, Wire and Sleeve 84
Climbers 90
Fire Pots 109
Grips 85
Harnesses, Safety 92
Holsters, Plier 88
Kits, Tool 89
Knives, Electricians' 89
Knives, Skinning 89
Knives, Splitting, Sheath, Cable. 89
Lines, Hand 86
Pliers 87, 88
Pockets, Plier 88
Pouches, Glove 89
Pullers, Fish Tape 275
Saws, Tree Trimmer 80
Scissors 89
Sheaths, Skinning Knife 89
Straps, Climber 90, 91
Straps, Extension 92
Straps, Safety 92
Tackles, Block 86
Torches, Blow 96
Torches, Linemen's 96
Trimmers, Tree 80
Twisters, Sleeve 84
Windshields, Furnace 109
Wire Tools 85, 86
Wrenches, Lag Screw 90
Wrenches, Linemen's 90
Klenzairs 700
Kliegl Borderlights 589
Footlights 589
Spotlights, Incandescent 589
Strips, Cove Light 589
Knife Switches, Condulet, Type YKK 350
Switches, FA 463–467
Knives, Electricians' 89
Skinning, Linemen's, Klein 89
Splitting, Sheath, Cable, Klein ... 89
Knob Fixtures, Swinging, Peirce ... 50
Racks, Distributing, Peirce 35
Screw Insulators, Telephone, Peirce 34
Knobs, Insulating, Hemingray 53
Porcelain, Split 266
Porcelain, Telephone Bracket, Hubbard 34
Rack, Telephone, Peirce 35
Telephone, Thomas 266
Kode-Kalls, Benjamin 623

L

Page

Ladders, Extension, Oshkosh 80
Manhole, Hubbard 111
Ladles, Melting 109
Lag Screw Wrenches, Klein 90
Screws, Hubbard 32
Lakin Hickeys, Conduit 276
Lamp Annunciators, Edwards 614
Base Sockets, Hubbell 411
Changers 529
Cord, Armored, National 277
Cord, General 239
Cord, Whitney Blake 244
Cord Connectors, Flexsteel .. 278, 279
Globes, Watertight, Benjamin ... 584
Guards, Crescent 531, 532
Guards, Gripon 530
Guards, Hubbell 529
Guards, Loxon 530
Guards, Morse 530, 531
Guards, Portable 531, 532
Guards, Protector O 530
Guards, Watertight, Benjamin ... 585
Hangers, Peirce 46
Holder Assemblies, Reflector, Benjamin 570
Lead Brackets, Hubbard 48
Receptacles, Condulet, Type CRSE 358
Receptacles, Condulet, Type SRH 358
Screens, Day-Light, Esrobert 550
Lamp-Maintenance Hangers, Thompson 587
Lamps, Bunghole, R & S 532
Condulet, Portable, Type EVA .. 332
Condulet, Portable, Type EVS .. 332
Condulet, Portable, Type LPG .. 326
Condulet, Portable, Type LPH .. 326
Condulet, Portable, Type VS 326
Desk, Buss 555
Desk, Emeralite 552, 553
Desk, Faries 553, 554
Desk, Greenalite 553
Desk, Mefcolite 553
Floor, Faries 554
Incandescent, Silvray Processed, Graybar 541
Machine, Emeralite 553
Machine, Greenalite 553
Mazda, CX 526
Mazda, Country Home Service .. 523
Mazda, Daylight 523
Mazda, Decorative Service 524
Mazda, Floodlight Service 524
Mazda, G-E 523–527
Mazda, General Service 523
Mazda, High Voltage Service 523
Mazda, Inside Tinted 523
Mazda, Large 523
Mazda, Limited Service 524
Mazda, Locomotive Cab Service. 525
Mazda, Locomotive Headlight Service 525
Mazda, Miniature 527
Mazda, Natural Colored 526
Mazda, Photo 526
Mazda, Projection Service 525
Mazda, Sign Service 524
Mazda, Special Features 526
Mazda, Spotlight Service 524
Mazda, Street Lighting Service .. 525
Mazda, Street Railway Service .. 525
Mazda, Sunlight 526

L Page

Lamps, Mazda, Train Service.... 525
Mazda, Tubular..... 524
Neon Glow..... 527
Portable, Buss..... 555
Portable, Emeralite.....552, 553
Portable, Faries.....553, 554
Portable, Greenalite..... 553
Portable, Hand.....531, 532
Portable, Mefcolite..... 553
Receptacle and Resistor Indicating, G-E..... 179
Sewing, National..... 680
Therapeutic..... 554
Ultra-Violet, Graybar Miller.... 543
Lantern Batteries, Eveready..... 599
Floodlights, Crouse-Hinds..... 593
Lanterns, Spotlight, Eveready.... 599
Lath Supports, Bar, National..... 294
Lead Covered Cable, General..231, 232
Cable, Habirshaw..... 226
Cable, Telephone.....668–671
Wire, General.....231, 232
Leland Flashers..... 528
Lenses, Floodlight, Crouse-Hinds.. 595
Levolier Switches, Fixture..... 425
Library Stack Light Reflectors, Day-Brite..... 550
Light Sources, G-E..... 199
Light and Heat Applicators, Thermolite..... 554
Lighters, Tobacco, M-B..... 693
Lighting, Christmas Tree, Outfits. 529
Accessories, Graybar..... 545
Brackets, Adjustable, Tafco..... 555
Cable, Whitney Blake..... 245
Channel, Curtistrip.....561, 562
Channel, Lightstrip..... 560
Fixture Condulets, Explosion-Proof.....332, 333
Fixtures, Fountain, R & S..... 586
Fixtures, Graybar.....535–545
Fixtures, Pit, Benjamin..... 566
Fixtures, Porcelain, P & S..... 556
Fixtures, Street, Novalux, G-E 125–135
Fixtures, Swimming Pool, R & S. 586
Globes, Graybar.....533, 534
Standards, Street.....113–123
Units, Industrial, Crouse-Hinds.. 593
Lightning Arresters, Crystal Valve..... 154
Arresters, G-E.....152, 153
Arresters, Pellet, G-E..... 139
Lights, Aisle..... 588
Approach, Airport, Crouse-Hinds. 597
Beam, Graybar..... 545
Boundry, Airport, Crouse-Hinds. 597
Closet, Graybar..... 545
Flash, Eveready.....598, 599
Flood, Benjamin.....565, 566
Foot, Show Window, X-Ray.... 564
Night, Safety, Hamilton-Beach.. 527
Obstacle, Airport, Crouse-Hinds. 597
Pit, Explosion-Proof..... 337
Pocket, Eveready..... 599
Spot, X-Ray..... 564
Wall, Eveready..... 599
Warning, H & H..... 414
Lightstrip..... 560
Limit Controls, Mercoid..... 473
Lincrest Fixtures, Graybar..... 537
Line Coats, Static-Resisting, Salisbury..... 71

L Page

Line Construction Trucks, Graybar..... 63
Hose, Salisbury..... 70
Linemen's Climbers..... 90
Glove Bags, Salisbury..... 70
Gloves, Rubber, Salisbury..... 72
Hammers, Graybar..... 93
Harnesses, Safety..... 92
Protector Gloves, Salisbury..... 72
Straps, Climber.....90, 91
Straps, Extension..... 92
Straps, Safety..... 92
Tool Belts..... 91
Tool Cases, Klein..... 89
Torches, Klein..... 96
Wrenches, Klein..... 90
Linen Tape, Hope..... 97
Lines, Hand, Klein..... 86
Links, Fuse, Cutout, G-E..... 150
Insulating, Bryant..... 370
Insulating, Chain, Socket, Hubbell..... 379
Renewal, Enclosed Fuse, Buss... 480
Renewal, Enclosed Fuse, Economy..... 479
Renewal, Enclosed Fuse, Jefferson 482
Renewal, Enclosed Fuse, Union.. 483
Renewal, Plug Fuse, Economy... 475
Splicing, Bryant..... 370
Splicing, Chain, Socket, Hubbell. 379
Load Centers, Square D..... 492
Lock Attachments, Switch, Rotary, Bryant..... 424
Switches, Burglar Alarm, Edwards..... 644
Washers, Hubbard..... 38
Washers, Peirce..... 38
Locking Sockets, Benjamin..... 575
Locknuts, Conduit, National..... 272
Conduit, T & B..... 272
Locomotive Deck Light Condulets, LM Series..... 362
Filler Hole Lamp Condulets..... 361
Headlight Switch Condulets..... 362
Stack Lamp Condulets..... 361
Loom..... 282
Loom Boxes, National..... 291
Loom Wire Cable, Sheathed, Non-Metallic..... 282
Fittings..... 282
Louver Plates, Receptacle, Bryant..... 395
Louvers, X-Ray..... 560
Low-Bed Trailers, Graybar..... 70
Loxon Guards, Lamp..... 530
Loys, Oshkosh..... 77
Lug Hook Handles..... 76
Hooks, Oshkosh..... 76
Lugs, Dossert..... 258
Frankel..... 260
Reliable..... 257
Soldering, Sherman.....254, 255
T & B..... 256
Wedge, Grounding, T & B..... 273
Luminaires, Graybar..... 544
Ornamental, Novalux, G-E...125–127
Suspension, Novalux, G-E....128–131
Luminous Tube Sign Transformers, Jefferson.....609, 610
Lungen Bells..... 627
Buzzers..... 627

M Page

M-B Chafing Dishes..... 694
Cookers and Waffle Irons, Combination..... 694
Heaters, Air..... 698
Lighters, Tobacco..... 693
Pads, Heating..... 699
Percolators, Coffee..... 691
Stoves, Disc..... 694
Toasters..... 694
Waffle Irons..... 695
Machine Bolts, Hubbard..... 31
Lamps, Emeralite..... 553
Lamps, Greenalite..... 553
Magnet Wire, Deltabeston..... 250
Wire, Rectangular..... 251
Wire, Round.....250, 251
Wire, Square..... 251
Magnetic Switches, G-E.....195, 196
Magneto Telephones.....657–662
Mail Boxes, Vestibule, Graybar... 652
Makers, Coffee, Glass, Silex...692, 693
Coffee, Glass, Sunbeam..... 693
Manhole Cover Hooks, Diamond.. 110
Frames and Covers..... 110
Guards..... 110
Ladders, Hubbard..... 111
Pulling-In Irons, Hubbard..... 111
Skids and Sheaves..... 110
Manson Tape..... 252
Marine Fittings, Benjamin..... 584
Horns, Klaxon..... 625
Receptacles, Bryant..... 371
Marion Irons, Flat..... 697
Markers, Pole, Hubbard..... 30
Marline..... 265
Marline Cable Hangers, National. 265
Massage Vibrators, Hamilton-Beach..... 700
Vibrators, Gilbert..... 702
Mast Arms, Benjamin..... 582
Arms, Hubbard..... 49
Mast-arm Cable, Habirshaw..... 228
Master Relays, Benjamin..... 624
Matthews Pullers, Slack..... 86
Matting, Switchboard, Rubber, Salisbury..... 72
Mazda Lamps, Country Home Service..... 523
CX..... 526
Daylight..... 523
Decorative Service..... 524
Floodlight Service..... 524
G-E.....523–527
General Service..... 523
High Voltage Service..... 523
Inside Tinted..... 523
Large..... 523
Limited Service..... 524
Locomotive Cab Service..... 525
Locomotive Headlight Service... 525
Miniature..... 527
Natural Colored..... 526
Photo..... 526
Projection Service..... 525
Sign Service..... 524
Special Features..... 526
Spotlight Service..... 524
Street Lighting Service..... 525
Street Railway Service..... 525
Sunlight..... 526
Train Service..... 525
Tubular..... 524
Mefcolite Lamps, Portable..... 553

M Page

Melting Ladles ... 109
Mercoid Controls ... 472, 473
Switches, Time ... 468
Metal Flags, Oshkosh ... 79
Molding, National ... 283
Molding, Ovalduct ... 284
Molding, Wiremold ... 285, 286
Molding, Xtensionduct ... 284
Reflectors, Hubbell ... 551
Metallic Tubing, Steeltubes ... 272
Meter Boxes, Indoor, Square D ... 448
Boxes, Outdoor, Square D ... 449
Service Breakers, Square D ... 450
Service Switches, Colt-Noark ... 456, 457
Service Switches, Square D ... 447, 448
Shunts, Groundulet ... 356
Shunts, T & B ... 273
Meters, Condenser, Panel, Weston ... 170
Foot-Candle, Weston ... 166
Illumination, Weston ... 166
Panel, Weston ... 170
Portable, Weston ... 161–166
Switchboard, Weston ... 166–169
Time, Electric, G-E ... 160
Watthour, G-E ... 158–160
Mica, Uncut ... 99
Micanite Cloth ... 99
Paper ... 99
Plate ... 98
Microammeters, Panel, Weston ... 169, 170
Portable, Weston ... 163
Miller Fixtures, Nu-Mode ... 544
Fixtures, Ultra-Violet ... 543
Lamps, Ultra-Violet ... 543
Milliammeters, Panel, Weston ... 170
Portable, Weston ... 161–164
Switchboard, Weston ... 169
Millivoltmeters, Portable, Weston ... 163
Mine Cable, Habirshaw ... 230
Jacks, Simplex ... 75
Telephones, Magneto ... 660, 661
Miniature Receptacles, Bryant ... 370
Mining Cable, General ... 238
Machine Cable, Tirex ... 243
Mixers, Drink, Gilbert ... 702
Food, Hamilton-Beach ... 701
Food, Mixmaster ... 701
Mixmasters ... 701
Mobilites, Benjamin ... 566
Mogul Condulets ... 312
Receptacles, Bryant ... 376
Receptacles, Hubbell ... 382
Sockets, Bryant ... 376
Sockets, Hubbell ... 382
Sockets, Porcelain, P & S ... 387
Moisture-Proof Fixtures, Benjamin ... 579
Molded Sockets, Bryant ... 369
Molding, Metal, National ... 283
Metal, Ovalduct ... 284
Metal, Wiremold ... 285, 286
Metal, Xtensionduct ... 284
Rainier ... 26
Xtensionduct ... 284
Molding Receptacles, Porcelain, Bryant ... 373
Molds, Rod, Ground, Hubbard ... 28
Monitor Bells, Edwards ... 628
Bells, PR ... 632

M Page

Monotube Poles, Union ... 22
Morse Guards, Lamp ... 530, 531
Motor Control Switches, Bryant ... 421
Lead Cable, Tirex ... 243
Plug Caps, Bryant ... 392
Plugs, Hubbell ... 404
Plugs, Polarized, Hubbell ... 408
Plugs, Twist-Lock, Hubbell ... 397, 398
Starting Compensators, G-E ... 195, 196
Starting Rheostats, G-E ... 194, 197
Starting Switch Condulets, Explosion-Proof ... 336
Starting Switches, G-E ... 193, 194, 197
Starting Switches, Square D ... 446
Motor-Generator Sets, G-E ... 193
Motors, Alternating Current, G-E ... 181–192
Direct Current, G-E ... 180, 186, 187, 192
Gear, G-E ... 186, 187
Series Wound, G-E ... 193
Sewing Machine, Hamilton-Beach ... 680
Special Service, G-E ... 193
Synchronous, G-E ... 188, 189
Mounting Straps, P & S-Despard ... 384
Mountings, Protector, Telephone ... 667
Multiple Outlet Plugs, Hemco ... 391
Muralier Fixtures, Graybar ... 542

N

Nails, Dating, Pole, Hubbard ... 30
Name Plates, P & S-Despard ... 384
Natco Conduit, Clay ... 101–103
Connectors, Pipe ... 102
Dowel Pins ... 103
Tape, Joint ... 103
National Bondnuts ... 273
Box and Bar Sets ... 292
Boxes, Cable ... 291, 292
Boxes, Flush Device ... 294
Boxes, Gang ... 291
Boxes, Loom ... 291
Boxes, Outlet ... 287–292
Boxes, Switch ... 292–294
Bushcaps ... 273
Bushings, Conduit ... 272
Cable, Armored ... 277
Cable, Armored, Ovalflex ... 282
Conduit, Flexible ... 277
Connectors, Box ... 277–279
Connectors, Cable ... 107
Connectors, Wire ... 263, 264
Cord, Lamp ... 277
Couplings, Conduit, Flexsteel ... 279
Hangers, Cable, Marline ... 265
Lamps, Sewing ... 680
Locknuts, Conduit ... 272
Molding, Metal ... 283
Nipples, Reducing ... 279
Pyramid Brushes, Carbon ... 209
Rings, Cable ... 265
Saddles, Cable Ring ... 265
Studs, Fixture ... 274
Supports, Lath, Bar ... 294
Neatsfoot Oil ... 89
Neon Sign Fittings ... 268, 269
Glow Lamps ... 527
High Voltage Indicators, Brach ... 171
Sign Tape ... 268
Sign Transformers, Jefferson ... 609, 610

N Page

Neonlite Cable, Gas Tube, Whitney Blake ... 245
Nepcoduct Under Floor Wiring Systems ... 298–300
Nesco Baking Sets ... 690
Casseroles ... 690
Cooking Sets ... 690
Roasters ... 690
Never-Creep Anchors, Guy ... 51
New Wrinkle Receptacle Bodies, Plug, Bryant ... 367
Socket Bases, Bryant ... 367
Socket Bodies, Bryant ... 367
Socket Caps, Bryant ... 367
Switch Bodies, Bryant ... 367
Niggerheads ... 67
Night Light Receptacles, P & S-Despard ... 384
Lights, Safety, Hamilton-Beach ... 527
Nipples, Conduit, Chase ... 273
Reducing, Flexsteel ... 279
Nokorode Soldering Paste ... 253
Noma Holders, Christmas Tree ... 529
Lighting Outfits, Christmas Tree ... 529
Non-Metallic Flexible Conduit, Flextube ... 282
Sheathed Cable, General ... 234
Sheathed Cable, Loom Wire ... 282
Novalux Brackets, Street Lighting ... 134
Controllers, Photoelectric ... 141
Cutouts, Pothead ... 136
Cutouts, Transformer ... 142
Fixtures, Street Lighting, G-E ... 125–135
Hangers, Street Lighting ... 134
Ornamental Luminaires ... 125–127
Protectors, Transformer ... 140
Remote Control Apparatus, Street Lighting ... 140
Suspension Luminaires ... 128–131
Transformers, Street Lighting ... 136–142
Nubel Bells, Edwards ... 626
Nublade Switches, Colt-Noark ... 454, 455
Number Units, House, H & H ... 415
Nu-Mode Fixtures, Graybar Miller ... 544
Nut Setters, Thor ... 216
Tighteners, Speedway ... 212
Nuts, Bond, National ... 273
Lock, Conduit, National ... 272
Eye, Hubbard ... 30
Guyeye, Hubbard ... 30
Lock, Conduit, T & B ... 272

O

Obround Condulets ... 305–311
Condulets, Threadless ... 307–309
Obstacle Lights, Airport, Crouse-Hinds ... 597
Office Wire, Damp-Proof ... 246
Ohmmeters, Panel, Weston ... 170
Oil, Neatsfoot ... 89
Oil Burner Ignition Transformers, Jefferson ... 610
Fuse, Cutouts, D & W ... 150
Oilers, Speedway ... 212
Okonite Tape ... 252
Openers, Door, Edwards ... 643
Ornamental Luminaires, Novalux, G-E ... 125–127

O

Page

Oscillograph Tubes, Cathode Ray. 672
Oshkosh Barricades, Folding..... 79
Bars, Crow..... 77
Bars, Digging..... 77
Bars, Tamping..... 77
Coating, Pike Pole..... 77
Diggers..... 50
Flags, Metal..... 79
Guards, Pike Pole..... 76
Handles, Cant Hook..... 76
Handles, Carrying Hook..... 76
Handles, Lug Hook..... 76
Handles, Pike Pole..... 76
Hooks, Brush..... 79
Hooks, Cant..... 76
Hooks, Carrying or Lug..... 76
Ladders..... 80
Loys..... 77
Peavies..... 76
Poles, Pike.....76, 77
Reels, Barrow..... 79
Reels, Take-Up..... 79
Saws, Tree..... 80
Shovels..... 78
Signals, Warning..... 79
Slicks..... 77
Spoons, Post Hole..... 78
Spuds, Digging..... 77
Supports, Pole..... 77
Trimmers, Tree..... 80
Outdoor Meter Boxes, Square D.. 449
Outfits, Lighting, Christmas Tree. 529
Outlet Box Covers.....287–291
Box Covers, Reflector Socket, Benjamin..... 575
Box Extension Rings.....287–290
Box Hangers..... 295
Box Receptacles, Bryant 372–374, 392, 393
Box Receptacles, Hemco....373, 393
Box Receptacles, Hubbell..... 381
Box Receptacles, P & S.....387, 388
Boxes.....287–292
Boxes, Concrete, National..... 291
Boxes and Hoods, Combination, Benjamin..... 574
Plates, Radio, Hubbell..... 436
Plates, Telephone, Hubbell..... 436
Outlets, Convenience, H & H.399, 414
Convenience, Hubbell.....399, 400
Convenience, P & S-Despard.... 383
Fan Hanger, FA 417
Floor, Fullman.....301–303
Floor, R & S.....295, 304
Floor, Steel City..... 301
Floor, T & B..... 301
Hanger, Clock, H & H..... 416
Hanger, Clock, Hubbell..... 417
Hanger, Fan, Bryant..... 417
Hanger, Fan, H & H..... 416
Hanger, Fan, R & S..... 417
Radio, H & H..... 415
Radio, P & S-Despard..... 383
Utility, T & B..... 301
Ovalduct Molding..... 284
Ovalflex Armored Cable..... 282
Ozite Compound, Filling..... 107

P

PR Bells.....631, 632, 635
Buzzers.....631, 632
P & S Cleats, Suspension, Porcelain. 389

P

Page

P & S Receptacles, Concealed, Porcelain..... 387
Receptacles, Fixture, Porcelain... 388
Receptacles, Intermediate..... 388
Receptacles, Outlet Box.....387, 388
Receptacles, Screw Ring, Porcelain..... 388
Receptacles, Surface, Porcelain.. 387
Shade Holders, Shurlok..... 388
Socket Bases..... 386
Socket Bodies..... 386
Socket Caps..... 386
Sockets, Mogul..... 387
Sockets, Porcelain..... 386
Sockets, Shurlok..... 388
Sockets, Weatherproof.....386, 389
P & S-Despard Plates, Flush..384, 385
Receptacles.....383, 384
Switches..... 383
Pads, Heating, Hewitt..... 699
Heating, M-B..... 699
Paint Pots, Salisbury..... 73
Panel Boards, Benjamin.....496–504
Boards, Bull-Dog.....493–495
Boards, FA.....505–519
Boards, Square D.....491, 492
Boards, Trumbull.....520–522
Box Connectors, Flexsteel..... 278
Boxes, Columbia.....488, 489
Connector Extensions, T & B... 279
Instruments, Weston..... 170
Panelboard Condulets, Explosion-Proof.....334, 335
Panelboards, Explosion-Proof, Condulet..... 335
Panels, Call, Residence, Faraday 631, 632
Circuit Breaker, Transformer, G-E..... 137
Switch, Plug, Transformer, G-E. 137
Paper, Micanite..... 99
Varnished..... 99
Parabolites, Benjamin..... 572
Parallel Cord, Whitney Blake.... 244
Parkway Cable, General.....233, 234
Cable, Habirshaw..... 227
Parts, Socket, Hubbell..... 378
Pass-Over Blocks, Rainier..... 26
Paste, Soldering..... 253
Patterson Indicators, Tank..... 625
Paul Pumps, Suction.....202–205
Water Systems.....202–205
Pay-Out Reels, Oshkosh..... 79
Pear Pushes, Edwards..... 642
Peavies, Oshkosh..... 76
Pedestal Signs, Day-Brite..... 548
Pedestals, Condulet..... 366
Pedestrian Tunnel Reflectors, Day-Brite..... 550
Peirce Adapters, Thimble..... 40
Bolts, Expansion..... 94
Brackets, Dead-End..... 47
Brackets, Spreader..... 46
Chucks, Hand..... 96
Clevises, Corner..... 44
Clevises, Crossarm..... 44
Clevises, Dead-End..... 44
Clevises, Insulated..... 44
Clevises, Thimble..... 44
Drills, Hammer..... 96
Fixtures, Swinging Knob..... 50
Gains, Pole, Presteel..... 31
Hangers, Lamp..... 46

P

Page

Peirce Holders, Wire 47
Insulators, Rack, Cable..... 111
Insulators, Screw, Knob, Telephone..... 34
Insulators, Secondary Rack..... 45
Insulators, Strain..... 42
Knobs, Rack, Telephone..... 35
Pins, Clamp..... 38
Pins, Forged Steel..... 39
Pins, Insulator, Broad Base..... 37
Pins, Insulator, Corner..... 37
Pins, Insulator, Lag Screw..... 37
Pins, Insulator, Long Shank..... 36
Pins, Insulator, Pole Top.....40, 41
Pins, Insulator, Railway Feeder. 361
Pins, Insulator, Short Shank.... 36
Pins, Insulator, Transformer.... 37
Plates, Corner..... 38
Plates, Reinforcing, Crossarm... 31
Points, Drill..... 96
Racks, Cable..... 111
Racks, House..... 45
Racks, Knob, Distributing..... 35
Racks, Secondary.....44–46
Saddles, Crossarm..... 38
Seats, Pole..... 34
Shields, Expansion..... 96
Straps, Crossarm..... 38
Straps, Dead-End..... 46
Tamping Tools..... 96
Thimbles..... 40
U-Bolts, Crossarm..... 38
Washers, Centering..... 40
Washers, Lock..... 38
Wireholders, Telephone..... 35
Pellet Arresters, Lightning, G-E... 139
Pendent Pushes, Edwards..... 638
Switches, Bryant..... 424
Switches, Hemco..... 423
Percolators, Coffee, M-B..... 691
Perlite Signs..... 547
Phase-Changing Transformers, G-E..... 147
Photoelectric Controllers, Novalux, G-E..... 141
Relays, G-E..... 199
Picture Reflectors, Day-Brite..... 549
Pike Pole Coating, Oshkosh..... 77
Pole Guards, Oshkosh..... 76
Pole Handles, Oshkosh..... 76
Poles, Oshkosh.....76, 77
Pilot Caps, Bryant..... 392
Light Receptacles, Hubbell..... 411
Light Receptacles, P & S-Despard 384
Light and Receptacle Plates, Bryant..... 394
Light and Switch Plates, Bryant.. 394
Lights and Convenience Outlets, Combination, Hubbell..... 400
Lights and Receptacles, Combination, Bryant..... 394
Lights and Switches, Combination, Bryant..... 394
Pin Specifications, Wood, Rainier.. 23
Pine Poles, Creosoted.....14–21
Poles, Southern.....14–21
Poles, Yellow.....7, 14–21
Pins, Clamp, Peirce..... 38
Crossarm, Hubbard-OB..... 37
Dowel, Conduit, Natco..... 103
Dowel, Hubbard..... 107
Forged Steel, Peirce..... 39
Insulator, Broad Base, Peirce.... 37

P Page

Pins, Insulator, Corner, Peirce.... 37
Insulator, Lag Screw, Peirce.... 37
Insulator, Long Shank, Peirce... 36
Insulator, Pole Top, Peirce....40, 41
Insulator, Railway Feeder, Peirce..... 36
Insulator, Short Shank, Peirce... 36
Insulator, Transformer, Peirce... 37
Insulator, Western Union, Hubbard..... 36
Insulator, Wood Top, Hubbard.. 36
Wood..... 23
Pintle Hooks, Trailer..... 70
Pipe, Reinforcing, Hubbard..... 29
Pipe Benders, Allen..... 276
Benders, T & B..... 276
Clamps, Diamond.....274, 275
Clamps, Sherman..... 273
Connectors, Natco..... 102
Fittings, Three-E..... 157
Hangers, Wedgtite..... 276
Pushers, Hydraulic, Greenlee.... 108
Pushing Jacks, Simplex..... 108
Straps, One-Hole, T & B..... 274
Pit Lighting Fixtures, Benjamin... 566
Lights, Explosion-Proof..... 337
Pivots, Watthour Meter, G-E..... 160
Plaster Rings, X-Ray..... 559
Plate, Micanite..... 98
Super-Micanite..... 99
Plate Finishes, Bryant..... 429
Screws, Bakelite, Hubbell..... 413
Sections, Flush, Bryant.....430, 431
Plates, Bakelite, H & H..... 441
Bell Push, Bryant..... 427
Bell Push, H & H..... 441
Blank, H & H..... 441
Blank, Hubbell.....412, 436
Ceiling.....287, 288
Combination, H & H.....441, 442
Combination, Hubbell.....413, 437
Convenience Outlet, H & H..... 441
Convenience Outlet, Hubbell.... 412
Corner, Peirce..... 38
Duracrome, H & H..... 441
Flush, Bryant.....427, 428
Flush, H & H..... 441
Flush, Hemco..... 427
Flush, Hubbell..... 437
Flush, P & S-Despard.....384, 385
Flush, Polarized, Receptacle, Bryant..... 396
Hegemite, H & H..... 441
Hot, Everhot.....688, 689
Hot, Proctor..... 690
Hub, Conduit, FA Series..... 352
Hub, Conduit, MF Series..... 352
Hub, Conduit, MK Series..... 352
Hub, Conduit, RSMP Series.... 347
Hub, Conduit, RSP Series..... 347
Hub, Conduit, YYP Series..... 352
Louver, Receptacle, Bryant..... 395
Name, P & S-Despard..... 384
Outlet, Radio, Hubbell..... 436
Outlet, Telephone, Hubbell..... 436
Pilot Light and Receptacle, Bryant..... 394
Pilot Light and Switch, Bryant.. 394
Pole, Hubbard..... 48
Push Button, Edwards.....640, 641
Push Button, Vestibule, Graybar 652
Receptacle, H & H..... 441
Receptacle, Radio, Hubbell..... 400

P Page

Plates, Receptacle and Pilot Light, Bryant..... 394
Reinforcing, Crossarm, Peirce... 31
Special, Hubbell..... 413
Strain, Hubbard..... 29
Switch, Bryant.....427, 428
Switch, Duplex, Hubbell..... 435
Switch, H & H..... 441
Switch, Hemco..... 427
Switch, Push, Hubbell..... 436
Switch, Toggle, Hubbell..... 436
Switch, Triplex, Hubbell..... 435
Switch, Uniplex, Hubbell..... 434
Switch and Pilot Light, Bryant.. 394
Telephone, Hubbell..... 412
Telephone Outlet, H & H..... 441
Time-Saver, H & H..... 441
Plier Holsters, Klein..... 88
Pockets, Klein..... 88
Pliers, Klein.....87, 88
Plug Adapters, Hubbell..... 405
Bodies, Hemco..... 391
Caps, Attachment, Bryant..... 392
Caps, Attachment, H & H..... 414
Caps, Attachment, Hubbell..402, 405
Caps, Attachment, P & S-Despard..... 383
Caps, Attachment, Polarized, Bryant.....395, 396
Caps, Attachment, Polarized, Hubbell..... 403
Caps, Hemco..... 391
Caps, Motor, Bryant..... 392
Cord Sets, Heater, H & H..... 416
Fuse Casings, D & W..... 475
Fuse Cutouts, Hemco..... 474
Fuses, Bryant..... 474
Fuses, Buss..... 475
Fuses, Clearsite..... 475
Fuses, Economy..... 475
Fuses, Hemco..... 474
Fuses, Jefferson..... 474
Receptacle Bodies, New Wrinkle, Bryant..... 367
Receptacle Condulets.....345, 346
Receptacle and Pilot Light Plates, Bryant..... 394
Receptacles and Pilot Lights, Combination, Bryant..... 394
Receptacles and Switches, Combination, Bryant..... 394
Switch Panels, Transformer, G-E 137
Plugs, Appliance, Acorn..... 416
Appliance, Hemco..... 416
Appliance, R & S..... 418
Arktite.....339–342
Attachment, Bryant..... 391
Attachment, H & H..... 414
Attachment, Hubbell..... 401
Attachment, Medium Base, Bryant..... 369
Condulet, Battery Charging..... 364
Condulet, Type BP.....345–347
Condulet, Type CP.....339–341
Condulet, Type DP..... 353
Condulet, Type RQ..... 345
Fuseless, Bryant..... 474
Heater, H & H..... 416
Motor, Hubbell..... 404
Motor, Polarized, Hubbell..... 408
Motor, Twist-Lock, Hubbell.397, 398
Multiple Outlet, Hemco..... 391

P Page

Plugs and Jacks, Transfer, Current, G-E..... 178
Transfer, Potential, G-E..... 178
Plugs and Receptacles, Arktite.. 338
Arktite, Explosion-Proof..... 337
R & S.....418, 419
Plunger Type Bells, Edwards..... 629
Pocket Lights, Eveready..... 599
Pockets, Floor, Century..... 588
Plier, Klein..... 88
Wall, Century..... 588
Points, Drill, Diamond..... 95
Drill, Peirce..... 96
Polarized Attachment Plug Caps, Bryant.....395, 396
Attachment Plug Caps, Hubbell.....403, 405–410
Caps, Hubbellock..... 399
Cord Connectors, Bryant..... 395
Cord Connectors, Hubbell...405, 408
Cord Connectors, Hubbellock... 399
Motor Plugs, Hubbell..... 408
Receptacle, Adapters, Hubbell... 411
Receptacles, Bryant.....395, 396
Receptacles, Hubbell.....405–410
Receptacles, Industrial, Hubbellock..... 399
Pole Bands, Hubbard..... 50
Climbers, Linemen's..... 90
Dating Nails, Hubbard..... 30
Derricks, Automobile, Graybar.65, 66
Dinkeys, Graybar..... 68
Gains, Presteel, Peirce..... 31
Markers, Hubbard..... 30
Plates, Hubbard..... 48
Pulling Jacks, Simplex..... 73
Reinforcing Bands, Hubbard.... 29
Seats, Peirce..... 34
Step Specifications, Rainier..... 23
Steps, Hubbard..... 30
Steps, Wood..... 23
Stubbing Washers, Hubbard.... 30
Supports, Oshkosh..... 77
Trailers, Graybar..... 69
Poles, Cedar.....7–13
Chestnut..... 7
Monotube, Union..... 22
Pike, Oshkosh.....76, 77
Pine, Creosoted.....14–21
Pine, Southern.....14–21
Pine, Yellow.....7, 14–21
Steel..... 22
Wood.....7–21
Pony Wall Sockets, Bryant..... 373
Wall Sockets, Hubbell..... 379
Porcelain Bases, Socket, New Wrinkle, Bryant..... 367
Bushings, Federal..... 268
Cleats, Suspension, P & S..... 389
Cleats, Thomas.....266, 267
Insulators, Split..... 266
Insulators, Thomas.....54–61, 266
Knobs, Telephone Bracket, Hubbard..... 34
Knobs, Telephone Rack, Peirce.. 35
Lighting Fixtures, P & S..... 556
Lined Sockets, Bryant..... 369
Receptacles, Ceiling, Hubbell 380, 381
Receptacles, Cleat, Bryant...373, 374
Receptacles, Cleat, Hemco..... 375
Receptacles, Cleat, Hubbell..380, 381

P Page

Porcelain Receptacles, Cleat, Mogul, Hubbell 382
Receptacles, Concealed, Bryant.. 375
Receptacles, Concealed, P & S... 387
Receptacles, Double End, Bryant 374
Receptacles, Fixture, P & S..... 388
Receptacles, Intermediate, Bryant 371
Receptacles, Intermediate, P & S 388
Receptacles, Mogul, Hubbell.... 382
Receptacles, Molding, Bryant... 373
Receptacles, Outlet Box, Bryant 372–374, 392
Receptacles, Outlet Box, Hemco.. 373
Receptacles, Outlet Box, P & S 387, 388
Receptacles, Pilot Light, Hubbell 411
Receptacles, Screw Ring, P & S.. 388
Receptacles, Sign, Bryant..... 375
Receptacles, Sign, Hemco..... 375
Receptacles, Sign, Hubbell... 381, 382
Receptacles, Sign, P & S..... 389
Receptacles, Surface, P & S..... 387
Receptacles, Twist-Lock, Hubbell 397, 398
Receptacles, Wall, Hubbell..... 401
Receptacles, Weatherproof, Bryant 375
Rosettes, Bryant 376
Socket Bases, Bryant 372
Socket Bases, Hubbell 380
Socket Bodies, Bryant 372
Socket Bodies, Hubbell 380
Socket Caps, Bryant 372
Socket Caps, Hubbell 380
Sockets, Bragdon, Bryant..... 374
Sockets, Hubbell 380
Sockets, Mogul, Hubbell..... 382
Sockets, P & S 386
Sockets, Shurlok, P & S..... 388
Sockets, Weatherproof, Bryant.. 374
Sub-Bases, Switch, Bryant..... 423
Tubes 267
Portable Blowers, Speedway..... 207
Blowers, Sturtevant 207
Cord, General 239
Cord, Tirex 243
Cord, Whitney Blake 244
Drills, Speedway 210
Drills, Thor 213–215
Floor Fans, Ilgair 208
Grinders, Thor 215
Hammers, Speedway 211
Hammers, Thor 216
Instruments, Weston 161–166
Lamp Guards 531, 532
Lamps, Buss 555
Lamps, Emeralite 552, 553
Lamps, Faries 553, 554
Lamps, Greenalite 553
Lamps. Hand 531, 532
Lamps, Mefcolite 553
Saws, Speedway 211
Saws, Thor 216
Searchlights, Excellight..... 599
Sewing Machines, Graybar..... 680
Telephones, Magneto..... 662
Ventilators, Ilgair 209
Porter Clippers, Bolt 90
Cutters, Wire 90
Portland Count Controllers..... 618

P Page

Post Hole Shovels, Oshkosh..... 78
Hole Spoons, Oshkosh..... 78
Posts, Binding, Fahnestock..... 263
Posts, Street Lighting 113–123
Potential Transfer Jacks and Plugs, G-E 178
Transformers, Weston..... 165
Pothead Cutouts, Novalux, G-E.. 136
Fittings, G & W 106
Potheads, G & W 105
General 104
Pots, Fire, Klein 109
Glue, American Beauty..... 222
Glue, G-E 222
Paint, Salisbury 73
Pouches, Glove, Klein..... 89
Power Reels, Collapsible, Graybar 68
Take-Offs, Propeller Shaft, Graybar 67
Prefocusing Receptacles, Bryant.. 371
Sockets, Bryant 371
Preservative, Wood, Sozol..... 22
Preservative Treatment for Wood Poles 8–10, 18, 19
Pressing Irons, American Beauty.. 698
Pressure Switches, G-E..... 198
Presteel Pole Gains, Peirce..... 31
Primary Cells, Edison..... 601–603
Cutouts, G-E 149
Proctor Hot Plates..... 690
Irons, Flat 697
Radiators and Driers..... 698
Toasters 694
Waffle Irons 695
Program Clocks, Self-Winding.... 618
Projectolites, Vaporproof, Benjamin 579
Projector Bases, Floodlight, Crouse-Hinds 595
Brackets, Floodlight, Crouse-Hinds 595
Lenses, Floodlight, Crouse-Hinds 595
Projectors, Ceiling Height, Crouse-Hinds 596
Floodlight, Crouse-Hinds 590–596
Propeller Shaft Power Take-Offs, Graybar 67
Protective Blankets, Rubber, Salisbury 71
Sleeves, Rubber, Salisbury..... 71
Protector Blocks, Telephone..... 666
Gloves, Linemen's, Salisbury.... 72
Mountings, Telephone..... 667
O Lamp Guards..... 530
Protectors, Telephone..... 666
Transformer, G-E..... 140
Wire, Guy, Hubbard..... 27
Public Address Equipment, Western Electric..... 674
Pull Cord Switches, Graybar..... 627
Socket Attachments, Hubbell.... 390
Switches, Bryant..... 424, 425
Switches, Canopy, H & H..... 442
Switches, Hubbell..... 432
Pullers, Fuse, Ideal..... 481
Slack, Matthews..... 86
Tape, Fish, Klein..... 275
Pulley Blocks, Chance..... 86
Pulleys, Manila Rope..... 81, 82
Pulling Jacks, Pole, Simplex..... 73

P Page

Pulling-In Frames, Cable, B & L. 110
Irons, Manhole, Hubbard..... 111
Pumps, Air, Beer Pressure, Saylor-Beall..... 206
Suction, Paul..... 202–205
Purifiers, Air, Klenzair..... 700
Push Button Blocks, Edwards.... 638
Button Plates, Edwards..... 640, 641
Button Plates, Vestibule, Graybar 652
Button Stations, G-E..... 201
Button Switches, Flush, Hubbell. 434
Buttons, Benjamin..... 624
Buttons, Bus Signal, Graybar... 627
Buttons, Edwards..... 638–642
Buttons, Faraday..... 640
Escutcheons, Flush, Edwards 639, 640
Switch Plates, Hubbell..... 436
Switches, Bryant..... 425
Switches, Flush, H & H..... 439
Pushers, Pipe, Hydraulic, Greenlee..... 108
Pushes, Bell, P & S-Despard..... 384
Card Holder, Edwards..... 642
Conduit, Edwards..... 640
Desk, Edwards..... 638
Floor, Edwards..... 641
Pear, Edwards..... 642
Pendent, Edwards..... 638
Table, Edwards..... 638
Watertight, Edwards..... 641
Pushing Jacks, Pipe, Simplex..... 108
Pyramid Brushes, Carbon..... 209

Q

Quadbreak Switches, Colt-Noark 453, 454

R

RCA Radiotrons..... 676
R-Type Fixtures, Graybar..... 539
R & S Boxes, Fixture Hanger..... 294
Boxes, Floor..... 304
Connectors, Cord, Appliance.... 418
Extensions, Floor, Combination.. 304
Fixtures, Lighting, Fountain.... 586
Fixtures, Lighting, Swimming Pool..... 586
Fixtures, Vaporproof..... 585, 586
Globes, Glass..... 586
Guards, Lamp..... 532
Lamps, Bunghole..... 532
Outlets, Fan Hanger..... 417
Outlets, Floor..... 295
Plugs, Appliance..... 418
Portables, Hand..... 532
Receptacles, Appliance..... 418
Receptacles and Plugs..... 415, 416
Supports, Cable, Conduit..... 275
Switches and Receptacles, Watertight..... 418
Rack Insulators, Cable, Peirce.... 111
Knobs, Telephone, Peirce..... 35
Racks, Cable, Hubbard..... 111
Cable, Peirce..... 111
House, Peirce..... 45
Knob, Distributing, Peirce..... 35
Secondary, Peirce..... 44–46
Radiators and Driers, Proctor.... 698
Radio Batteries, Dry, Eveready 600, 601

R Page

Radio Broadcasting Equipment, Western Electric ... 673
Caps, P & S-Despard ... 383
Outlet Plates, Hubbell ... 436
Outlets, H & H ... 415
Outlets, P & S-Despard ... 383
Receivers, Western Electric ... 673
Receiving Sets, Colonial ... 675
Receptacle Plates, Hubbell ... 400
Receptacles, Hubbell ... 400
Switches, Trumbull ... 467
Tubes ... 676
Radiotrons, RCA ... 676
Railway Annunciators, Edwards ... 613
Condulets ... 357–364
Receptacles, Bryant ... 371
Signal Cable, Trenchlay ... 237
Switches, Bryant ... 422
Transformers, Jefferson ... 611
Rainier Arms, Kicker ... 26
Blocks, Pass-Over ... 26
Blocks, Spacer ... 26
Braces, Crossarm ... 33
Crossarms ... 24, 25
Guards, Wire, Guy ... 27
Moulding, Fir ... 26
Moulding, Tree ... 26
Specifications, Bracket ... 23
Specifications, Conduit ... 24
Specifications, Crossarm ... 24
Specifications, Pole Step ... 23
Specifications, Wood Pin ... 23
Range Receptacles, Bryant ... 396
Receptacles, Hubbell ... 409
Switches, Bryant ... 423
Ranges, Kitchen, Crawford ... 685–687
Ratchet Jacks, Simplex ... 74–76
Reading Light Condulets, Engineers', LMK Series ... 361
Receivers, Radio, Western Electric ... 673
Telephone ... 667
Receiving Sets, Radio, Colonial ... 675
Receptacle Adapters, Polarized, Hubbell ... 411
Bodies, Fixture, Hubbell ... 401
Bodies, Plug, New Wrinkle, Bryant ... 367
Condulets, Plug ... 345, 346
Housings, Condulet, Type BRG ... 325
Housings, Condulet, Type BRY ... 349
Housings, Condulet, Type QE ... 343, 344
Plates, H & H ... 441
Plates, Radio, Hubbell ... 400
and Pilot Light Plates, Bryant ... 394
Receptacle and Resistor Indicating Lamps, G-E ... 179
Receptacles, Appliance, R & S ... 418
Bull's Eye, Bryant ... 395
Candelabra, Bryant ... 370
Ceiling, Porcelain, Hubbell ... 380, 381
Cleat, H & H ... 390
Cleat, Mogul, Bryant ... 376
Cleat, Mogul, Hubbell ... 382
Cleat, Porcelain, Bryant ... 373, 374
Cleat, Porcelain, Hemco ... 375
Cleat, Porcelain, Hubbell ... 380, 381
Concealed, Porcelain, Bryant ... 375
Concealed, Porcelain, P & S ... 387
Curtistrip ... 561
Double End, Porcelain, Bryant ... 374
Fixture, Bryant ... 392

R Page

Receptacles, Fixture, Porcelain, P & S ... 388
Floor Outlet, Steel City ... 301
Flush, Acorn ... 399
Flush, Bryant ... 393, 394
Flush, Hemco ... 393
Flush, Hubbell ... 400
Industrial, Bryant ... 371
Intermediate, P & S ... 388
Lamp, Condulet, Type CRSE ... 358
Lamp, Condulet, Type SRH ... 358
Marine, Bryant ... 371
Miniature, Bryant ... 370
Mogul, Bryant ... 376
Mogul, Hubbell ... 382
Molding, Porcelain, Bryant ... 373
Night Light, P & S-Despard ... 384
Outlet Box, Bryant ... 372–374, 392, 393
Outlet, Box, Hemco ... 373, 393
Outlet Box, Hubbell ... 381
Outlet Box, P & S ... 387, 388
P & S-Despard ... 383, 384
Pilot Light, Hubbell ... 411
Pilot Light, P & S-Despard ... 384
Polarized, Bryant ... 395, 396
Polarized, Hubbell ... 405–410
Polarized, Industrial, Hubbellock 399
Porcelain, Intermediate, Bryant ... 371
Prefocusing, Bryant ... 371
Radio, Hubbell ... 400
Railway, Bryant ... 371
Range, Bryant ... 396
Range, Hubbell ... 409
Screw Ring, Porcelain, P & S ... 388
Sign, Intermediate, Bryant ... 371
Sign, Porcelain, Bryant ... 375
Sign, Porcelain, Hemco ... 375
Sign, Porcelain, Hubbell ... 381, 382
Sign, Porcelain, P & S ... 389
Street Lighting, G-E ... 135
Surface, Porcelain, P & S ... 387
Twist-Lock, Hubbell ... 397, 398
Wall, Porcelain, Hubbell ... 401
Weatherproof, Byrant ... 375
Weatherproof, Hubbell ... 381, 401
Receptacles and Boxes, Floor, Steel City ... 301
Receptacles and Bull's Eyes, Combination, H & H ... 414
Receptacles and Condulets, Arktite ... 340–342
Receptacles and Housings, Arktite ... 340–342
Receptacles and Pilot Lights, Combination, Bryant ... 394
Receptacles and Plugs, Arktite ... 338
Arktite, Explosion-Proof ... 337
R & S ... 418, 419
Receptacles and Switches, Combination, H & H ... 414, 415
Plug, Combination, Bryant ... 394
Watertight, R & S ... 418
Recti Bells, Edwards ... 630
Buzzers, Edwards ... 630
Rectifiers, Battery Charging, G-E ... 605, 606
Constant Potential, G-E ... 606
Copper Oxide, G-E ... 607
Square D ... 604
Reducers, Condulet ... 365
Socket, Bryant ... 376
Reducing Nipples, Flexsteel ... 279
Reel Capacities, Cable ... 230

R Page

Reel Jacks, Cable, Simplex ... 73, 74
Trailers, Cable, Graybar ... 68
Reels, Barrow, Oshkosh ... 79
Cable, Gleason ... 251
Pay-Out, Oshkosh ... 79
Power, Collapsible, Graybar ... 68
Wire ... 225
Wire, Magnet ... 250
Wire, Oshkosh ... 79
Reflector Bezels, Condulet ... 358
Covers, Glass, Benjamin ... 581
Fixtures, Watertight, Benjamin ... 584
Holders, Benjamin ... 577
Holders, Condulet ... 358
Hoods, Benjamin ... 570, 576
Lamp Holder Assemblies, Benjamin ... 570
Socket Fittings, Benjamin ... 575
Sockets, Benjamin ... 574, 575
Suspension Fittings, Benjamin ... 583
Reflectors, Bracket, Day-Brite ... 549
Bulletin, Benjamin ... 580
Cashier Cage, Day-Brite ... 550
Condulet ... 358
Emeralite ... 550
Fitting Room, Day-Brite ... 549
Glass ... 546
Glass, Emeralite ... 550
Glass, Greenalite ... 550
Glassteel, Benjamin ... 567, 572
Greenalite ... 550
Half, Benjamin ... 583
Hubbell ... 551
Industrial, Silvray, Graybar ... 541
Library Stack Light, Day-Brite ... 550
Metal, Hubbell ... 551
Picture, Day-Brite ... 549
RLM, Benjamin ... 567–569
Separable Hood, Benjamin ... 576
Sewing Machine, Benjamin ... 582
Shade Holder, Benjamin ... 577, 581–583
Show Case, Day-Brite ... 548, 549
Show-Case, X-Ray ... 564
Sign, Benjamin ... 578
Sign, Emblem, Benjamin ... 580
Socket, Benjamin ... 571, 572
Threaded, Benjamin ... 573
Tubular, Benjamin ... 583
Tunnel, Pedestrian, Day-Brite ... 550
Type RR, Benjamin ... 573
Type 79, Benjamin ... 567–569
Wall Case, Day-Brite ... 549
Weatherproof, Benjamin ... 583
Window, Show, X-Ray ... 557–559
X-Ray ... 557–559, 564
Refractors, Holophane, G-E ... 124
Refrigerator Fixtures, Day-Brite ... 549
Reinforced Portable Cord, Whitney Blake ... 244
Reinforcing Bands, Pole, Hubbard 29
Plates, Crossarm, Peirce ... 31
Straps, Hubbard ... 34
Relays, Burglar Alarm, Edwards ... 644
Dunco ... 471
Photoelectric, G-E ... 199
Signal System, Benjamin ... 624
Telecode, Benjamin ... 624
Time, Induction, G-E ... 177
Transformer, G-E ... 178
Reliable Cable Grips ... 109
Clamps, Ground ... 274
Clips, Test ... 262
Connectors, Solderless ... 257

R Page

Remote Control Apparatus, Street Lighting, G-E..... 140
Renewable Fuses, Enclosed, Buss 480, 481
Fuses, Enclosed, Economy..... 479
Fuses, Enclosed, Jefferson..... 482
Fuses, Enclosed, Union..... 483
Fuses, Plug, Economy..... 475
Residence Call Panels, Faraday 631, 632
Resistor Units, Enameled, G-E... 200
Resistor and Receptacle Indicating Lamps, G-E..... 179
Return Call Annunciators, Edwards..... 614
Call Stations, Edwards..... 615
Revere Clocks, Chiming.....705, 706
Rheostat Wire, Deltabeston..... 249
Rheostats, Starting, Motor, G-E 194, 197
Ridge Irons, Hubbard..... 40
Rigid Steel Conduit.....270, 271
Ring Saddles, Cable, National.... 265
Ringers, Telephone..... 667
Ringing Transformers, Bell, Edwards..... 609
Transformers, Bell, Jefferson.... 608
Rings, Bridle, Diamond..... 264
Cable, National..... 265
Control, Floodlight, X-Ray..... 563
Drive, Diamond..... 264
Extension, Outlet Box.....287–290
Fixture, Conduit, Type UCY... 355
Globe Holding, Watertight, Benjamin..... 585
Plaster, X-Ray..... 559
Roasters, Nesco..... 690
Rod Clamps, Ground, Hubbard... 28
Molds, Ground, Hubbard..... 28
Rods, Anchor, Hubbard..... 28
Duct, Diamond..... 107
Duct, Empire..... 107
Fibre..... 97
Ground, Hubbard..... 28
Romex Cable, Non-Metallic Sheathed..... 234
Roof Ventilators, Power, Ilg..... 208
Rope, Clips, Wire, Hubbard..... 29
Rosettes, Porcelain, Bryant..... 376
Rotary Switch Handles, Bryant... 424
Switch Lock Attachments, Bryant..... 424
Switches, Surface, Bryant....420–423
Switches, Surface, Hubbell..... 432
Rubber Armored Cable, Tirex.... 242
Covered Cable, General.....231–239
Covered Cable, Habirshaw...223–230
Covered Wire, General.....231–239
Covered Wire, Habirshaw....223–230
Sheathed Cord, Whitney Blake.. 244
Tape..... 252

S

Saddles, Crossarm, Peirce..... 38
Ring, Cable, National..... 265
Safe-T-Glow Detectors, High Tension..... 171
Safety Fusenters, Bull-Dog..... 490
Harnesses, Linemen's..... 92
Night Lights, Hamilton-Beach... 527
Straps, Klein..... 92
Switch Condulets, FA Series.... 351

S Page

Safety Switch Condulets, Type MKS..... 352
Switch Condulets, Type ZT..... 353
Switches, Bull-Dog.....451–453
Switches, Colt-Noark.....453–457
Switches, Square D.....443–446
Switches, Trumbull.....458–460
Salisbury Bags, Glove, Linemen's. 70
Bags, Tool..... 73
Blankets, Protective..... 71
Caps, Test..... 73
Coats, Line..... 71
Coats, Rubber..... 71
Connectors, Line Hose..... 70
Gloves, Linemen's..... 72
Hoods, Insulator..... 71
Hose, Line..... 70
Matting, Switchboard..... 72
Pots, Paint..... 73
Separators..... 73
Sleeves, Protective..... 71
Stools, Insulating..... 72
Salts, Soldering..... 252
San-Fer-Ann Annunciators, Edwards..... 612
Sauter Switches, Time..... 469
Saw and Drill Kits, Speedway.... 211
Saws, Portable, Speedway..... 211
Portable, Thor..... 216
Tree, Oshkosh..... 80
Trimmer, Tree, Klein..... 80
Saylor-Beall Compressors, Air.... 206
Guns, Spray..... 207
Pumps, Air, Beer Pressure..... 206
Scissors, Electric..... 702
Electricians'..... 89
Screens, Color, X-Ray..... 560
Lamp, Day-Light, Esrobert..... 550
Screw Anchors, Chance..... 51
Anchors, Diamond..... 94
Globes, Watertight, Benjamin... 584
Insulators, Knob, Telephone, Peirce..... 34
Ring Receptacles, Porcelain, P & S..... 388
Screwdrivers, Electric, Speedway..... 212
Electric, Thor..... 215
Screws, Angle, Diamond..... 264
Lag, Hubbard..... 32
Plate, Bakelite, Hubbell..... 413
Sealing Condulets, Type EYS.... 337
Searchlights, Incandescent, Crouse-Hinds..... 592
Portable, Excellight..... 599
Seats, Pole, Peirce..... 34
Seco Switches, Meter Service..... 456
Secondary Rack Insulators, Peirce 45
Racks, Peirce.....44–46
Sectional Switch Boxes, National.....292–294
Sections, Plate, Flush, Bryant 430, 431
Separable Connectors, Faraday... 617
Hood Reflectors, Benjamin..... 576
Separators, Salisbury..... 73
Service Boxes, Colt-Noark..... 485
Drop Cable, General..... 234
Drop Cable, Habirshaw..... 229
Entrance Cable, General..... 234
Entrance Condulets, Obround... 321
Switches, Bull-Dog..... 453
Switches, Meter, Colt-Noark.456, 457

S Page

Service Switches, Meter, Square D.....447, 448
Switches, Square D..... 446
Transformers, G-E.....148, 149
Services, Coffee, M-B..... 691
Coffee, Silex..... 693
Servisleevs, Hubbard..... 29
Setscrew Connectors, Sherman.... 253
Sets, Baking, Nesco..... 690
Cooking, Nesco..... 690
Cord, Bryant..... 396
Cord, Cube-Tap, Hemco..... 416
Cord, Heater, Hemco..... 416
Cord, Plug, Heater, H & H..... 416
Cord, Range, Hubbell..... 409
Hand, Telephone..... 665
Motor-Generator, G-E..... 193
Receiving, Radio, Colonial..... 675
Testing, Telephone..... 667
Setters, Nut, Thor..... 216
Sewing Lamps, National..... 680
Machine Motors, Hamilton-Beach..... 680
Machine Reflectors, Benjamin... 582
Machines, Graybar.....679, 680
Shackles, Dead-Ending, Hubbard. 35
Shade Holder Reflectors, Benjamin.....577, 581–583
Holders, Benco..... 389
Holders, Bryant..... 390
Holders, Hubbell..... 391
Holders, Shurlok, P & S..... 388
Shades, Emeralite..... 550
Glass..... 546
Greenalite..... 550
Hubbell..... 551
X-Ray.....557–559, 564
Sheath Splitting Knives, Cable, Klein..... 89
Sheathed Cable, Non-Metallic, General..... 234
Cable, Non-Metallic, Loom Wire 282
Sheaths, Skinning Knife, Linemen's..... 89
Sheaves and Skids, Manhole..... 110
Sheaves and Tackles, Cable, B & L 110
Sheets, Fibre..... 97
Shelcrest Fixtures, Graybar..... 537
Sherarduct Conduit.....270, 271
Sherman Clamps, Ground..... 273
Connectors, Set Screw..... 253
Connectors, Wire..... 255
Lugs, Soldering.....254, 255
Shields, Duct, Cable, Hubbard... 110
Expansion, Diamond.....93–95
Expansion, Keystone..... 93
Expansion, Peirce..... 96
Furnace, Klein..... 109
Shims, Guy, Hubbard..... 29
Shock Absorber Crossarms, Benjamin..... 583
Absorber Suspension Fittings, Benjamin..... 572
Absorbers, Thompson..... 587
Absorbing Sockets, Benjamin.... 574
Shot Fire Cable, Tirex..... 243
Shovels, Oshkosh..... 78
Show Case Fixtures, Day-Brite.548, 549
Reflectors, X-Ray..... 564
Show Window Footlights, X-Ray. 564
Reflectors, X-Ray.....557–559
Shunt Trip Attachments, Circuit Breaker, G-E..... 176

S Page

Shunts, Meter, Groundulet..... 356
Meter, T & B..... 273
Shurlok Shade Holders, P & S.... 388
Sockets, P & S..... 388
Shutters, Fan, Ilg..... 208
Sign Fittings, Neon.....268, 269
Flashers, Leland..... 528
Lighting Transformers, G-E..... 149
Receptacles, Intermediate, Bryant..... 371
Receptacles, Porcelain, Bryant.. 375
Receptacles, Porcelain, Hemco... 375
Receptacles, Porcelain, Hubbell 381, 382
Receptacles, Porcelain P & S.... 389
Reflectors, Benjamin..... 578
Reflectors, Emblem, Benjamin... 580
Tape, Neon..... 268
Transformers, Luminous Tube, Jefferson.....609, 610
Signal Buzzers, Faraday.....633–636
Cable, Habirshaw..... 228
Cable, Railway, Trenchlay..... 237
Gongs, Faraday.....633–636
System Relays, Benjamin..... 624
Signaling Devices, Flushcall, Edwards..... 626
System Cable, Whitney Blake... 654
Systems, Hospital..... 620
Transformers, Edwards..... 608
Transformers, Jefferson..... 608
Signalite Current Taps, Hubbell.. 411
Signals, Bull's Eye, Kirkland..... 616
Code Calling, Benjamin..... 623
Fire Alarm, Benjamin..... 624
Industrial, Benjamin.....622, 623
Industrial, Edwards..... 621
Warning, Oshkosh..... 79
Signs, Day-Brite..... 548
Directional, Perlite..... 547
Exit, Day-Brite..... 548
Exit, Perlite..... 547
Pedestal, Day-Brite..... 548
Perlite..... 547
Silex Broilers..... 695
Glass Coffee Makers.....692, 693
Silk Tape, Hope..... 97
Silvray Fixtures, Graybar.....540, 541
Processed Incandescent Lamps, Graybar..... 541
Reflectors, Gaybar..... 541
Simplex Braces, Trench..... 108
Fittings, Trench Brace..... 108
Jacks.....73–75
Jacks, Pipe Pushing..... 108
Single Stroke Bells, Edwards..628, 630
Siren Switches, Remote Control... 621
Sirens, Federal..... 621
Skeleton Bells, Edwards..... 628
Vibrating Bells, Faraday..... 635
Skids and Sheaves, Manhole..... 110
Skinning Knives, Linemen's, Klein..... 89
Slack Puller Jacks, Simplex..... 73
Pullers, Matthews..... 86
Sleeve Twisters, Klein..... 84
Sleeve and Wire Clamps, Klein.... 84
Sleeves, Connector, National..... 107
Dossert..... 258
National.....263, 264
Protective, Rubber, Salisbury... 71
Sleeving, Hope..... 97
Slicks, Oshkosh..... 77

S Page

Slow-Burning Wire, General..... 241
Smokemasters, Sunbeam..... 693
Snap Switches, Surface, H & H... 439
Snatch Blocks, Aluminum Cable.. 82
Blocks, Copper Cable..... 82
Blocks, Manila Rope.....81, 82
Blocks, Stringing..... 82
Blocks, Wire Rope..... 82
Socket Attachments, Pull, Hubbell..... 390
Bases, Hubbell.....377, 378
Bases, New Wrinkle, Bryant.... 367
Bases, P & S..... 386
Bases, Porcelain, Bryant..... 372
Bases, Porcelain, Hubbell..... 380
Bodies, Cold Molded, Bryant.... 369
Bodies, Electrolier, Bryant..... 368
Bodies, Hubbell.....377, 378
Bodies, Intermediate, Bryant.... 371
Bodies, Mogul, Bryant..... 376
Bodies, New Wrinkle, Bryant... 367
Bodies, P & S..... 386
Bodies, Porcelain, Bryant..... 372
Bodies, Porcelain, Hubbell..... 380
Bodies, Titan, Bryant..... 369
Bushings, Hubbell..... 390
Caps, Cold Molded, Bryant..... 369
Caps, Electrolier, Bryant..... 368
Caps, Hubbell.....377, 378
Caps, Intermediate, Bryant..... 371
Caps, Mogul, Bryant..... 376
Caps, New Wrinkle, Bryant..... 367
Caps, P & S..... 386
Caps, Porcelain, Bryant..... 372
Caps, Porcelain, Hubbell..... 380
Caps, Titan, Bryant..... 369
Chain, Hubbell..... 379
Chain Acorns, Hubbell..... 379
Chain Insulating Links, Hubbell. 379
Chain Insulators, Hubbell..... 379
Chain Splicing Links, Hubbell... 379
Chain Tassels, Hubbell..... 379
Cord, Hubbell..... 379
Extensions, Benjamin..... 390
Finishes, Bryant..... 429
Fittings, Reflector, Benjamin.... 575
Keys, Bryant..... 367
Parts, Hubbell..... 378
Reducers, Bryant..... 376
Reflectors, Benjamin.....571, 572
Te-Taps, Hubbell..... 410
Sockets, Bayonet, Bryant..... 369
Bragdon, Bryant..... 374
Candelabra, Bryant..... 370
Candelabra, Hubbell..... 379
Candle, Hubbell..... 379
Clamp, Porcelain, Federal..... 390
Cold Molded, Bryant..... 369
Composition, Cold Molded, Bryant..... 369
Curtistrip..... 561
Double Filament Lamp, Bryant. 376
Electrolier, Bryant..... 369
Electrolier, Hemco..... 368
Fixture, Acorn..... 378
Fixture, Benjamin..... 576
Hemco..... 368
Hubbell..... 377
Intermediate, Bryant..... 371
Lamp Base, Hubbell..... 411
Locking, Benjamin..... 575
Medium Base, Bryant..... 369
Mogul, Bryant..... 376

S Page

Sockets, Mogul, Hubbell..... 382
Mogul, Porcelain, P & S..... 387
Molded, Bryant..... 369
Porcelain, Hubbell..... 380
Porcelain, P & S..... 386
Porcelain Lined, Bryant..... 369
Prefocusing, Bryant..... 371
Reflector, Benjamin.....574, 575
Shock Absorbing, Benjamin..... 574
Shurlok, P & S..... 388
Street Lighting, G-E..... 135
Threaded-Catch, Hubbell..... 378
Titan, Bryant..... 369
Twin, Bryant..... 368
Wall, Pony, Bryant..... 373
Wall, Pony, Hubbell..... 379
Weatherproof, Benco..... 389
Weatherproof, Benjamin..... 390
Weatherproof, Bryant..... 374
Weatherproof, Hemco..... 374
Weatherproof, Hubbell.....380, 382
Weatherproof, P & S.....386, 389
Solder, Bar..... 96
Soldering Coppers..... 96
Irons, American Beauty..... 217
Irons, G-E..... 217
Irons, Vulcan..... 217
Lugs, Sherman.....254, 255
Paste..... 253
Salts..... 252
Sticks..... 253
Solderless Connectors, Dossert.... 258
Connectors, Frankel..... 260
Connectors, Reliable..... 257
Connectors, T & B..... 256
Solenoid-Operated Valves, G-E.. 201
Sources, Light, G-E..... 199
Sozol Wood Preservative..... 22
Spacer Blocks, Rainier..... 26
Span Clamps, Hubbard..... 35
Spartan Attachment Plug Caps... 392
Cord Connector Bodies..... 392
Motor Plug Caps..... 392
Pilot Caps..... 392
Plug Receptacles and Pilot Lights, Combination..... 394
Receptacle Bodies, New Wrinkle. 367
Receptacles, Fixture..... 392
Receptacles, Flush..... 393
Receptacles, Outlet Box.....392, 393
Receptacles and Switches, Plug, Combination..... 394
Spartan to Edison Adapters..... 392
Spaulding Guards, Wire, Tree.... 27
Special Finishes, Bryant..... 429
Finishes, Hubbell..... 438
Plates, Hubbell..... 413
Special-Toned Buzzers, Faraday 634, 636
Gongs, Faraday.....634, 636
Specifications, Bracket, Rainier.. 23
Cedar Poles.....10–12
Conduit, Rainier..... 24
Crossarm, Rainier..... 24
Pin, Wood, Rainier..... 23
Pine Poles.....15, 16
Pole Step, Rainier..... 23
Speed Controllers, Variable, Ilg... 209
Speedway Blowers, Portable..... 207
Drills, Portable..... 210
Grinders..... 212
Hammers, Portable..... 211
Kits, Drill and Saw..... 211

S Page

Speedway Nut Tighteners 212
Oilers 212
Saws, Portable 211
Screwdrivers 212
Stands, Drill 212
Splicers' Carts, Cable, Graybar ... 69
Splicing Clamps, Klein 84
Compound 252
Links, Bryant 370
Links, Chain, Socket, Hubbell ... 379
Splicing and Jointing Materials, Cable, General 107, 240
Splitting Knives, Sheath, Klein ... 89
Spools, Wire, Magnet 250
Spoons, Post Hole, Oshkosh 78
Spotlight Lanterns, Eveready 599
Spotlights, Incandescent, Kliegl .. 589
X-Ray 564
Spray Guns, Saylor-Beall 207
Spreader Brackets, Peirce 46
Springs, Burglar Alarm, Edwards . 644
Spuds, Digging, Oshkosh 77
Spurs, Linemen's 90
Square D Attachments, Branch Circuit 448
Boxes, Meter, Indoor 448
Boxes, Meter, Outdoor 449
Breakers, Circuit 449, 450
Breakers, Meter Service 450
Cabinets, Fuse 490
Centers, Load 492
Clips, Fuse 476
Guest Announcers 637
Keys, Cover Control, Switch 445
Panels and Cabinets 491, 492
Rectifilters 604
Switches, Cast Iron 449
Switches, General Service 446
Switches, Industrial 443–446
Switches, Meter Service 447, 448
Switches, Motor Starting 446
Switches, Safety 443–446
Testers, Voltage 171
Square-Duct Wiring Troughs . 296, 297
Stack Lamp Condulets, LG Series . 361
Stancrest Fixtures, Graybar 538
Standards, Lighting, Street ... 113–123
Stands, Drill, Speedway 212
Drill, Thor 215
Grinder, Thor 216
Telephone, Desk 666
Staples, Copperweld, Hubbard 26
Insulated, Blake 265
Starting Cable, Whitney Blake ... 245
Compensators, Motor, G-E .. 195, 196
Rheostats, Motor, G-E 194, 197
Switches, Motor, G-E .. 193, 194, 197
Switches, Motor, Square D 446
Station Cable, Deltabeston 248
Ground Clamps, Reliable 274
Stations, Ansercall, Edwards 615
Fire Alarm, Edwards 618
Push Button, G-E 201
Return Call, Edwards 615
Steel City Benders, Conduit 276
Steel Cabinets, Columbia 488, 489
Conduit, Rigid 270, 271
Crossarms, Hubbard 42
Poles 22
Steeltubes Hickeys 276
Metallic Tubing 272
Steelwing Anchors, Hubbard 52
Stems, Fixture, Benjamin 582

S Page

Step Light Switches, Door, Graybar 627
Steps, Pole, Hubbard 30
Pole, Wood 23
Sterling Ammeters 171
Voltammeters 171
Sticks, Soldering 253
Stone Drills, Diamond 95
Stools, Insulating, Salisbury 72
Storage Batteries, Exide 603
Batteries, Titan 604
Stove Wire, Deltabeston 249
Stoves, Disc, M-B 694
Straighteners and Guides, Cable, Aerial 83
Strain Insulator Clevises, Hubbard 41, 43, 44
Insulators, Hubbard-OB 42
Insulators, Peirce 42
Insulators, Porcelain, Thomas .. 55, 60
Plates, Hubbard 29
Relief Cord Grips, Benjamin 575
Strand, Steel, Galvanized 50
Straps, Cable Guard, Hubbard 26
Climber, Linemen's 90, 91
Conduit 274
Conduit, Hubbard 26
Crossarm, Peirce 38
Curtistrip 562
Dead-End, Peirce 46
Extension, Klein 92
Grounding, Receptacle, Bryant .. 396
Mounting, P & S-Despard 384
Pipe, One-Hole, T & B 274
Reinforcing, Hubbard 34
Safety, Klein 92
Wall, Hubbard 29
Street Hood Brackets, Hubbard ... 48
Hood Brackets, Hubbard 49
Lighting Adapters, G-E 135
Lighting Ball Globes 124
Lighting Brackets, Novalux, G-E 134
Lighting Fixtures, Novalux, G-E 125–135
Lighting Glassware, G-E 132, 133
Lighting Hangers, Novalux, G-E 134
Lighting Reptacles, G-E 135
Lighting Remote Control Apparatus, G-E 140
Lighting Sockets, G-E 135
Lighting Standards 113–123
Lighting Transformers, G-E .. 136–142
Railway Telephones 662
Stringing Snatch Blocks 82
Strip Heaters, Chromalox 219
Heaters, G-E 218
Striplights, Cove 588
Strippers, Wire, Ideal 89
Strips, Battery, Fused, Faraday ... 617
Cove Light, Kliegl 589
Interconnection, Faraday 617
Terminal, Faraday 617
Stubbing Washers, Pole, Hubbard 30
Students' Galvanometers, Weston 171
Studs, Fixture, National 274
Sturtevant Blowers, Portable 207
Sub-Bases, Switch, Porcelain, Bryant 423
Submarine Cable, Armored, Habirshaw 228
Suction Pumps, Paul 202–205
Sweepers, Graybar 681

S Page

Sunbeam Glass Coffee Makers 693
Irons, Flat 697
Smokemasters 693
Sunkist Extractors, Juice 702
Super Service Cable, General . 237, 238
Cord, General 239
Super-Micanite Plate 99
Supports, Bus, Three-E 155, 156
Cable, Conduit, R & S 275
Curtistrip 562
Insulator, Three-E 157
Insulator, Universal 268
Lath, Bar, National 294
Pole, Oshkosh 77
Sure-Binders, Graybar 69
Surface Cabinets, Columbia 488
Switch Cover Finishes, Bryant ... 429
Switches, Rotary, Bryant 420–423
Switches, Rotary, Hubbell 432
Switches, Snap, H & H 439
Switches, Toggle, Hubbell 432
Switches, Tumbler, H & H 439
Suspension Cleats, Porcelain, P & S 389
Fittings, Benjamin 572
Fittings, Cable, Benjamin 583
Luminaires, Novalux, G-E ... 128–131
Strain Insulators, Porcelain, Thomas 60
Suspensions, Chain, Benjamin ... 582
Swamp Anchors, Hubbard 52
Sweat Blankets, Hewitt 699
Sweepers, Suction, Graybar 681
Swimming Pool Lighting Fixtures, R & S 586
Swinging Knob Fixtures, Peirce ... 50
Switch Bodies, Hubbell 377
Bodies, New Wrinkle, Bryant ... 367
Boxes, Columbia 488, 489
Boxes, National 292–294
Condulets, Explosion-Proof .. 333–336
Condulets, FS Series 359
Condulets, Headlight, LHS Series 362
Condulets, Safety, FA Series 351
Condulets, Safety, Type MKS ... 352
Condulets, Safety, Type ZT 353
Cover Control Keys, Square D .. 445
Cover Finishes, Surface, Bryant . 429
Handles, Heater, Bryant 424
Handles, Rotary, Bryant 424
Housings, Condulet, Type QE 343, 344
Keys, Bryant 424
Lock Attachments, Rotary, Bryant 424
Panels, Plug, Transformer, G-E .. 137
Plates, Bryant 427, 428
Plates, Duplex, Hubbell 435
Plates, H & H 441
Plates, Hemco 427
Plates, Push, Hubbell 436
Plates, Toggle, Hubbell 436
Plates, Triplex, Hubbell 435
Plates, Uniplex, Hubbell 434
Sub-Bases, Porcelain, Bryant 423
Switch and Pilot Light Plates, Bryant 394
Switchboard Instruments, Weston 166–169
Matting, Rubber, Salisbury 72
Wire, Deltabeston 249

S Page

Switchboards, Inter-Phone, Graybar 653
Power and Lighting 172
Telephone 654–657
Switches, Air Break, Three-E 155
Appliance, Toggle, Hubbell 432
Auxiliary, Circuit Breaker, G-E . . 176
Battery, Trumbull 467
Canopy, Bryant 425
Cast Iron, Square D 449
Colt-Noark, Entrance 457
Control, G-E 179
Cord, Bryant 424
Cord, Hemco 416
Cord, Toggle, Hubbell 432
Disconnecting, Three-E 155, 156
Door, Bryant 419
Door, Edwards 419
Door, H & H 419
Duplex, Hubbell 435
Electrolier, Bryant 421
Enclosed, Bull-Dog 451–453
Enclosed, Colt-Noark 453–457
Enclosed, Square D 443–449
Enclosed, Trumbull 458–460
Entrance, Colt-Noark 457
Entrance, Hemco 474
Expulsion Type, Bryant 421, 422
Externally Operated, Bull-Dog 451–453
Externally Operated, Colt-Noark 453–457
Externally Operated, Square D 443–449
Externally Operated, Trumbull 458–460
Fixture, Levolier 425
Float, G-E 198
General Service, Bull-Dog 453
General Service, Square D 446
Heater, Surface, Bryant 423
Industrial, Square D 443–446
Instrument, G-E 179
Kappa, Knife, Trumbull 466
Knife, Condulet, Type YKK 350
Knife, FA 463–467
Lock, Burglar Alarm, Edwards . . 644
Magnetic, G-E 195, 196
Motor Control, Bryant 421
Nublade, Colt-Noark 454, 455
P & S-Despard 383
Pendent, Bryant 424
Pendent, Hemco 423
Pressure, G-E 198
Pull, Bryant 424, 425
Pull, Canopy, H & H 442
Pull, Hubbell 432
Pull Cord, Graybar 627
Push, Bryant 425
Push, Flush, H & H 439
Push, Flush, Hubbell 434
Quadbreak, Colt-Noark 453, 454
Radio, Trumbull 467
Railway, Bryant 422
Range, Bryant 423
Rotary, Surface, Bryant 420–423
Rotary, Surface, Hubbell 432
Safety, Bull-Dog 451–453
Safety, Colt-Noark 453–457
Safety, Square D 443–446
Safety, Trumbull 458–460
Service, Meter, Colt-Noark . . 456, 457
Service, Meter, Square D 447, 448

S Page

Switches, Siren, Remote Control . . 621
Snap, Surface, H & H 439
Starting, Motor, G-E . . . 193, 194, 197
Starting, Motor, Square D 446
Step Light, Door, Graybar 627
Telephone, Trumbull 467
Time, Anderson 470
Time, Mercoid Triplex 468
Time, Sauter 469
Time-Saver, Flush, H & H 440
Toggle, Appliance, Hubbell 432
Toggle, Cord, Hubbell 432
Toggle, Flush, Hubbell 433–435
Toggle, Surface, Hubbell 432
Triplex, Hubbell 435
Tumbler, Flush, Bryant 425, 426
Tumbler, Flush, H & H 440
Tumbler, P & S-Despard 383
Tumbler, Surface, Bryant 423
Tumbler, Surface, H & H 439
Tumbler, Surface, Hemco 423
Tumbler, Trumbull 462
Uniplex, Hubbell 434
Vacuum, G-E 198
Switches and Bull's Eyes, Combination, Hubbell 400
Switches and Convenience Outlets, Combination, Hubbell 400
Switches and Pilot Lights, Combination, Bryant 394
Switches and Receptacles, Combination, H & H 414, 415
Plug, Combination, Bryant 394
Watertight, R & S 418
Switches and Warning Lights, Combination, H & H 414, 415
Synchronous Motors, G-E . . . 188, 189
Systems, Fire Alarm, Industrial . . . 619
Inter-Phone, Graybar 645–654
Signaling, Hospital 620
Under Floor Wiring, Nepcoduct 298–300
Water, Paul 202–205

T

T & B Benders, Conduit 276
Boxes, Floor 301
Boxes, Junction 295, 296
Bushings, Capped 273
Bushings, Conduit 272
Bushings, Ground 273
Clips, Cable 275
Connectors, Box 280, 281
Connectors, Solderless 256
Couplings, Conduit 274, 281
Extension Pieces, Fixture 273
Extensions, Connector, Panel 279
Fittings, Ground 273
Hangers, Conduit 275
Hickeys, Conduit 276
Hickeys, Fixture 274
Locknuts, Conduit 272
Outlets, Utility 301
Shunts, Meter 273
Straps, Pipe 274
Wedge-Lugs, Grounding 273
Table Clamps, Edwards 641
Pushes, Edwards 638
Taps, Hubbell 411
Tackle Blocks, Manila Rope 81
Tackles, Block, Klein 86

T Page

Tafco Brackets, Adjustable 555
Fixtures, Ceiling, Adjustable 555
Tailor Machine Motors, Hamilton-Beach 680
Take-Offs, Power, Propeller Shaft, Graybar 67
Take-Up Reels, Oshkosh 79
Tamping Bars, Oshkosh 77
Tools, Peirce 96
Tank Indicators, Patterson 625
Tape, Fish 275
Friction 252
Joint, Conduit, Natco 103
Linen, Hope 97
Rubber 252
Sign, Neon 268
Silk, Hope 97
Varnished 99
Waterproof 252
Tape Pullers, Fish, Klein 275
Tappers, Thor 216
Taps, Cable, Dossert 259
Cable, Frankel 261
Cable, T & B 256
Current, Acorn 410
Current, H & H 414
Current, Hubbell 410, 411
Gutter, Dossert 259
Gutter, Frankel 261
Table, Hubbell 411
Tassels, Chain, Socket, Hubbell . . . 379
Tees, Conduit, R & S 295
Telechron Clocks 703–706
Telecode Relays, Benjamin 624
Telegraph Augers, Chance 51
Wire, Galvanized 50
Wire, Whitney Blake 246
Telephone Bells, Western Electric . 664
Boxes, Desk Set 666
Cable, Lead Covered 668–671
Cleats, Thomas 266
Cords 663
Corner Brackets, Hubbard 34
Distributing Brackets, Hubbard . 34
Generators, Western Electric 664
Hand Sets 665
Insulators, Porcelain, Thomas . . . 54
Jack Condulets 359
Jacks 666
Knob Screw Insulators, Peirce . . . 34
Knobs, Thomas 266
Outlet Plates, H & H 441
Outlet Plates, Hubbell 436
Plates, Hubbell 412
Protector Blocks 666
Protector Mountings 667
Protectors 666
Rack Knobs, Peirce 35
Receivers 667
Ringers 667
Stands, Desk 666
Switchboards 654–657
Switches, Trumbull 467
Testing Sets 667
Transmitters 667
Wire, Galvanized 50
Wire, Whitney Blake 246
Wireholders, Peirce 35
Telephones, Central Battery . . 659, 660
Inter-Phone, Graybar 645–654
Magneto 657–662
Mine, Magneto 660, 661
Portable, Magneto 662

T Page

Telephones, Street Railway..... 662
Telescoping Isolators, Three-E... 157
Tender Lamp Condulets, LD Series..... 360
Lamp Condulets, LE Series..... 361
Terminal Blocks, Triplex..... 621
Strips, Faraday..... 617
Terminals, Cable..... 663
Cable, Circuit Breaker, G-E..... 176
Cable, G & W..... 105
Cable, General..... 104
Fuse, FA..... 476
Test Caps, Salisbury..... 73
Clips, Reliable..... 262
Clips, Universal..... 262
Connectors, Fahnestock..... 263
Tested Fuse Wire..... 476
Testers, Voltage, Square D..... 171
Voltage, Test-O-Lites..... 171
Testing Sets, Telephone..... 667
Test-O-Lites..... 171
Te-Taps, Hubbell..... 411
Socket, Hubbell..... 410
Therapeutic Lamps..... 554
Thermal Bi-Pass-Ors, Brach..... 268
Thermocouples, Western Electric..... 672
Thermolite Heat and Light Applicators..... 554
Thimble Adapters, Peirce..... 40
Clevises, Peirce..... 44
Thimbles, Guy, Hubbard..... 52
Peirce..... 40
Thomas Cleats, Porcelain.....266, 267
Insulators, Porcelain.....54–61, 266
Thompson Hangers, Lamp-Maintenance..... 587
Shock Absorbers..... 587
Thor Attachments, Clutch and Kick-Out..... 216
Drills, Portable.....213–215
Grinders, Bench..... 215
Grinders, Portable..... 215
Hammers, Portable..... 216
Nut Setters..... 216
Saws, Portable..... 216
Screwdrivers..... 215
Stands, Drill..... 215
Stands, Grinder..... 216
Tappers..... 216
Threaded Fixtures, Benjamin..... 573
Threaded-Catch Sockets, Hubbell 378
Threadless Adapters, Type UCT.. 365
Conduit Bushings, Type UCE... 366
Conduit Unions, Type UCC..... 366
Condulet Connectors, Type UCB 366
Condulet Connectors, Type UCA 365
Condulet Reducers..... 365
Condulets, FS Series.....314–317
Condulets, Fixture Hanger..... 354
Condulets, G-H Series.....315, 316
Condulets, J-K Series..... 322
Condulets, Obround.....307–309
Three-E Bells, Cable End..... 106
Cabinets, Switching and Fuse... 155
Clamps, Bus..... 157
Disconnects, Fuse..... 155
Fittings, Pipe..... 157
Fittings Conductor..... 157
Isolators, Telescoping..... 157
Supports, Bus.....155, 156
Supports, Insulator..... 157
Switches, Air Break..... 155

T Page

Three-E Switches, Disconnecting.....155, 156
Thru-Lites, Hemco..... 391
Thrustors, G-E..... 200
Tighteners, Nut, Speedway..... 212
Time Meters, Electric, G-E..... 160
Relays, Induction, G-E..... 177
Switches, Anderson..... 470
Switches, Mercoid Triplex..... 468
Switches, Sauter..... 469
Time-Saver Plates, H & H..... 441
Switches, Flush, H & H..... 440
Tirex Cable, Mining Machine..... 243
Cable, Motor Lead..... 243
Cable, Rubber Armored..... 242
Cable, Shot Fire..... 243
Cable, Welding..... 243
Cord, Portable..... 243
Titan Batteries, Storage..... 604
Socket Bodies, Bryant..... 369
Socket Caps, Bryant..... 369
Tite-Bind Connectors, Solderless.. 256
Toasters, M-B..... 694
Proctor..... 694
Toastmaster..... 696
Toastmaster Toasters..... 696
Tobacco Lighters, M-B..... 693
Toggle Bolts, Diamond..... 93
Switch Plates, Hubbell..... 436
Switches, Appliance, Hubbell.... 432
Switches, Cord, Hubbell..... 432
Switches, Flush, Hubbell....433–435
Switches, Surface, Hubbell..... 432
Tool Bags, Klein..... 91
Bags, Non-Metallic, Salisbury... 73
Belts, Linemen's..... 91
Cases, Linemen's, Klein..... 89
Kits, Klein..... 89
Post Grinders, Speedway..... 212
Tools, Wire, Klein.....85, 86
Torches, Blow, Klein..... 96
Linemen's, Klein..... 96
Toy Transformers, Jefferson..... 608
Track Jacks, Simplex.....74, 75
Traffic-Signal Gongs, Faraday... 634
Trailer Pintle Hooks..... 70
Trailers, Graybar.....68–70
Low-Bed, Graybar..... 70
Pole, Graybar..... 69
Reel, Cable, Graybar..... 68
Trance Brace Fittings, Simplex... 108
Transfer Jacks and Plugs, Current, G-E..... 178
Jacks and Plugs, Potential, G-E. 178
Transformer Brackets, G-E..... 148
Cutouts, Fuse, Oil, D & W..... 150
Cutouts, Novalux, G-E..... 142
Fuse Cutouts, G-E.....151, 152
Insulator Pins, Peirce..... 37
Junction Boxes, G-E..... 148
Protectors, G-E..... 140
Relays, G-E..... 178
Transformers, Air-Cooled, G-E 146–149
Auto, G-E.....146, 147, 149
Bell Ringing, Edwards..... 609
Bell Ringing, Jefferson..... 608
Boosting, G-E..... 147
Current, Tripping, G-E.....179, 180
Current, Weston.....164, 165
Distribution, G-E.....143–146
Double Wound, Jefferson..... 611
Ignition, Oil Burner, Jefferson... 610

T Page

Transformers, Low Voltage, Jefferson..... 608
Phase-Changing, G-E..... 147
Potential, Weston..... 165
Railway, Jefferson..... 611
Service, G-E.....148, 149
Sign, Luminous Tube, Jefferson 609, 610
Sign Lighting, G-E..... 149
Signaling, Edwards..... 608
Signaling, Jefferson..... 608
Street Lighting, G-E.....136–142
Toy, Jefferson..... 608
Transmitters, Radio..... 673
Telephone..... 667
Traps, Burglar Alarm, Edwards... 644
Treads, Floor, Edwards..... 641
Tree Holders, Christmas..... 529
Lighting Outfits, Christmas..... 529
Moulding, Rainier..... 26
Saws, Oshkosh..... 80
Trimmer Saws, Klein..... 80
Trimmers, Klein..... 80
Trimmers, Oshkosh..... 80
Wire, General..... 234
Wire, Habirshaw..... 229
Wire Guards, Spaulding..... 27
Trench Braces, Simplex..... 108
Trenchlay Cable, General.....235–237
Trimmer Saws, Tree, Klein..... 80
Trimmers, Tree, Klein..... 80
Tree, Oshkosh..... 80
Triplex Switch Plates, Hubbell.... 435
Switches, Hubbell..... 435
Switches, Time..... 468
Terminal Blocks..... 621
Tripping Current Transformers, G-E.....179, 180
Trolley Wire, Copper..... 240
Trouble Bells, Faraday..... 634
Troublemen's Blocks, Klein..... 86
Troughs, Wiring, Square-Duct 296, 297
Truck Bodies, Kiley..... 62
Trucks, Line Construction, Graybar..... 63
Trumbull Breakers, Circuit..... 461
Panels and Cabinets.....520–522
Switches, Battery..... 467
Switches, Kappa, Knife..... 466
Switches, Radio..... 467
Switches, Safety.....458–460
Switches, Telephone..... 467
Switches, Tumbler..... 462
Tubes, Oscillograph, Cathode Ray. 672
Porcelain..... 267
Radio..... 676
Vacuum..... 672
Tubing, Metallic, Steeltubes..... 272
Tubing Fibre..... 97
Tubular Lamp Guards, Crescent.. 531
Lamp Guards, Morse..... 531
Reflectors, Benjamin..... 583
Tumbler Switches, Flush, Bryant 425, 426
Switches, Flush, H & H..... 440
Switches, P & S-Despard..... 383
Switches, Surface, Bryant..... 423
Switches, Surface, H & H..... 439
Switches, Surface, Hemco..... 423
Switches, Trumbull..... 462
Tungar Battery Chargers, G-E 605, 606

T Page

Tungar Bulbs, G-E..... 607
Rectifiers, Constant Potential, G-E..... 606
Tunnel Reflectors, Pedestrian, Day-Brite..... 550
Turnbuckles, Hubbard..... 35
Twin Sockets, Bryant..... 368
Twin-Lites, Hemco..... 391
Twist Drills, Hammer, Diamond.. 95
Twisters, Sleeve, Klein..... 84
Twist-Lock Caps, Hubbell....397, 398
Cord Connectors, Hubbell...397, 398
Receptacles, Hubbell.....397, 398

U

U-Bolts, Crossarm, Peirce..... 38
Ultra-Violet Fixtures, Graybar Miller..... 543
Lamps, Graybar Miller..... 543
Uncut Mica..... 99
Under Floor Wiring Systems, Nepcoduct.....298–300
Underground Material.....100–111
Undervoltage Attachments, Circuit Breaker, G-E..... 176
Underwater Floodlights, Crouse-Hinds..... 591
Union Fuses.....483, 484
Union Monotube Poles..... 22
Standards, Street Lighting...114–119
Unions, Conduit, Threadless, Type UCC..... 366
Condulet, Type CCU..... 366
Condulet, Type UNY..... 365
Uniplex Switch Plates, Hubbell... 434
Switches, Hubbell..... 434
Unit-Package Fixtures, Benjamin. 579
Units, Lighting, Industrial, Crouse-Hinds..... 593
Resistor, Enameled, G-E..... 200
Universal Clips, Test..... 262
Supports, Insulator..... 268
Urns, Coffee, Drip, Automatic.... 693
Coffee, M-B..... 691
Utility Outlets, T & B..... 301

V

Vacuum Cleaners, Graybar..... 681
Switches, G-E..... 198
Tubes..... 672
Valves, Solenoid-Operated, G-E... 201
Vaporproof Fixtures, Condulet, GS Series..... 324
Fixtures, Condulet, Industrial 327–329
Fixtures, Condulet, Type ARB 326, 358
Fixtures, R & S.....585, 586
Lamps, Hand, Condulet..... 326
Projectolites, Benjamin..... 579
Vapor-Seal Fixtures, Benjamin... 578
Vaprotex Lamp Guards..... 532
Variable Speed Controllers, Ilg.... 209
Variety-Lites, Benjamin..... 579
Varnished Cambric Cable, General..... 232
Cambric Cable, Habirshaw..... 229
Cambric Wire, General..... 232
Canvas..... 99
Duck..... 99
Paper..... 99

V Page

Varnished Tape..... 99
Ventilating Fans, Ilg..... 207
Ventilation Fans, Graybar....682, 683
Ventilators, Kitchen, Ilgair..... 209
Portable, Ilgair..... 209
Roof, Power, Ilg..... 208
Vertical Braces, Hubbard..... 33
Vestibule Fixtures, Car, Conduulet, Type SRH..... 359
Mail Boxes, Graybar..... 652
Push Button Plates, Graybar.... 652
Vibrating Bells, Skeleton, Faraday. 635
Type Bells, Edwards..... 628
Vibrator Applicators, Hamilton-Beach..... 699
Vibrators, Massage, Gilbert..... 702
Massage, Hamilton-Beach..... 700
Voltage Testers, Square D..... 171
Testers, Test-O-Lites..... 171
Voltammeters, Battery Testing, Sterling..... 171
Portable, Weston.....161, 163, 164
Voltmeters, Panel, Weston..... 170
Portable, Weston.....161–164
Switchboard, Weston.....166–169
Volt-Milliammeters, Portable, Weston..... 164
Volt-Ohmmeters, Weston..... 165
Volume Blowers, Ilg..... 208
Vulcan Irons, Soldering..... 217

W

W.T. Insulators, Glass..... 54
W-Type Fixtures, Graybar..... 536
Waffle Irons, M-B..... 695
Irons, Proctor..... 695
Irons, Wafflemaster..... 696
Irons, Waffle-Witch..... 695
Waffle Irons and Cookers, Combination, M-B..... 694
Wafflemaster Waffle Irons..... 696
Waffle-Witch Waffle Irons..... 695
Wall Brackets, Graybar..... 545
Case Fixtures, Day-Brite..... 549
Fixture Bodies, Watertight, Benjamin..... 585
Fixture Brackets, Benjamin..... 585
Fixtures, Watertight, Benjamin.. 584
Lights, Eveready..... 599
Pockets, Century..... 588
Receptacles, Polarized, Hubbell 405, 407
Receptacles, Porcelain, Hubbell.. 401
Sockets, Pony, Bryant..... 373
Sockets, Pony, Hubbell..... 379
Straps, Hubbard..... 29
Warmers, Bottle, Hankscraft..... 696
Warning Lights, H & H..... 414
Lights and Switches, Combination, H & H.....414, 415
Signals, Oshkosh..... 79
Washers, Centering, Peirce..... 40
Clothes, Graybar..... 677
Guying, Hubbard..... 30
Lock, Hubbard..... 38
Lock, Peirce..... 38
Round, Hubbard..... 31
Square, Hubbard..... 31
Stubbing, Pole, Hubbard..... 30
Watchcase Buzzers, Edwards..... 627
Water Systems, Paul.....202–205
Waterproof Tape..... 252

W Page

Watertight Boxes, Fuse, Colt-Noark..... 485
Boxes, Service, Colt-Noark..... 485
Fixtures, Benjamin..... 584
Pushes, Edwards..... 641
Watthour Meters, G-E.....158–160
Wattmeters, Portable, Weston... 162
Weatherproof Boxes, T & B..... 295
Cable, General..... 241
Receptacles, Bryant..... 375
Receptacles, Hubbell.. .....381, 401
Reflectors, Benjamin..... 583
Sockets, Benco..... 389
Sockets, Benjamin..... 390
Sockets, Bryant..... 374
Sockets, Hemco..... 374
Sockets, Hubbell.....380, 382
Sockets, P & S.....386, 389
Wire, General..... 241
Webbing Hope..... 97
Wedge Lugs, Grounding, T & B... 273
Wedgetite Pipe Hangers..... 276
Weights, Cedar Pole..... 13
Pine Pole..... 20
Welding Cable, General..... 238
Cable, Tirex..... 243
Western Electric Audiometers.... 672
Audiphones..... 672
Bells, Telephone..... 664
Broadcasting Equipment..... 673
Cable, Telephone.....668–671
Condensers..... 663
Fuses, Tubular..... 664
Generators, Telephone..... 664
Public Address Equipment..... 674
Switchboards, Telephone....654–657
Telephones.....657–662
Thermocouples..... 672
Tubes, Vacuum..... 672
Weston Instruments, Panel..... 170
Instruments, Portable.....161–166
Instruments, Switchboard....166–169
Transformers, Current.....164, 165
Transformers, Potential..... 165
Whitney Blake Cable, Inter-Phone..... 654
Cable, Signaling System..... 654
Wire and Cable.....244–246
Winches, Graybar.....64, 65, 67
Wind Cone Fixtures, Airport, Crouse-Hinds..... 596
Window Footlights, X-Ray..... 564
Reflectors, Show, X-Ray....557–559
Windshields, Folding, Klein..... 109
Wire, Annunciator..... 246
Copper, Bare, General.....239, 240
Fixture, Deltabeston..... 247
Fuse, Tested..... 476
Guy, Galvanized..... 50
Headlight, Habirshaw..... 229
House, Rubber Covered, Habirshaw..... 225
Lead Covered, General.....231, 232
Magnet, Deltabeston..... 250
Magnet, Rectangular..... 251
Magnet, Round.....250, 251
Magnet, Square..... 251
Office, Damp-Proof..... 246
Rheostat, Deltabeston..... 249
Rubber Covered, General....231–239
Rubber Covered, Habirshaw .223–230
Signal, Habirshaw..... 228
Slow-Burning, General..... 241

W Page

Wire, Stove, Deltabeston..... 249
Switchboard, Deltabeston..... 249
Telegraph, Galvanized..... 50
Telegraph, Whitney Blake..... 246
Telephone, Galvanized..... 50
Telephone, Whitney Blake..... 246
Tree, General..... 234
Tree, Habirshaw..... 229
Trolley, Copper..... 240
Varnished Cambric, General.... 232
Weatherproof, General..... 241
Wire Connectors, Bryant..... 262
Connectors, Dossert..... 258
Connectors, Frankel..... 260
Connectors, Ideal..... 262
Connectors, National.....263, 264
Connectors, Reliable..... 257
Connectors, Sherman..... 255
Connectors, T & B..... 256
Cutters, Porter..... 90
Grips, Haven..... 86
Grips, Klein..... 85
Guards, Guy, Rainier..... 27
Guards, Tree, Spaulding..... 27
Holders, Peirce..... 47
Protectors, Guy, Hubbard..... 27

W Page

Wire Reels..... 225
Reels, Magnet..... 250
Reels, Oshkosh..... 79
Rope Clips, Hubbard..... 29
Spools, Magnet..... 250
Strippers, Ideal..... 89
Tools, Howe..... 86
Tools, Klein.....85, 86
Wire and Sleeve Clamps, Klein.... 84
Wireholders, Telephone, Peirce... 35
Wiremold Molding.....285, 286
Wiring Devices, Condulet, G-H Series..... 321
Devices, Condulet, GS Series.... 324
Devices, Condulet, J-K Series... 322
Devices, Condulet, Obround Series..... 311
Devices, Condulet, S Series..... 325
Systems, Floor, Under, Nepcoduct.....298–300
Troughs, Square-Duct.....296, 297
Wood Brackets..... 23
Conduit, Creosoted..... 103
Crossarms, Rainier.....24, 25
Pin Specifications, Rainier..... 23
Pole Steps..... 23

W Page

Wood Poles.....7–21
Preservative, Sozol..... 22
Wrenches, Lag Screw, Klein..... 90
Linemen's, Klein..... 90
Wrinklet Socket Bodies, Bryant.. 368
Socket Caps, Bryant..... 368

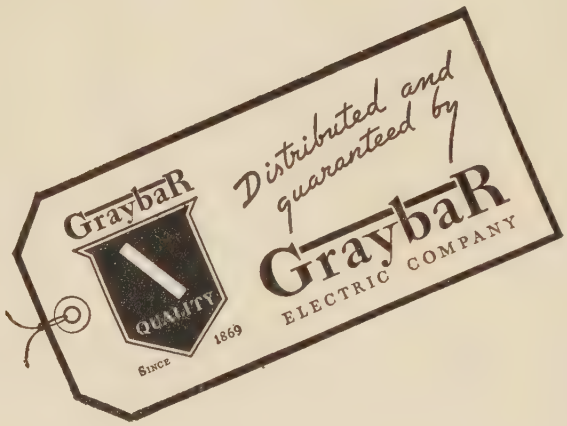
X

XDuct Conduit, Steel..... 270
Xela Scissors..... 89
X-Ray Color-Rays..... 560
Control Rings, Floodlight..... 563
Flanges, Finishing..... 559
Floodlights, Interior..... 563
Footlights, Show Window..... 564
Louvers..... 560
Reflectors.....557–559, 564
Rings, Plaster..... 559
Spotlights..... 564
Xtensionduct Molding..... 284
X-Type Fixtures, Graybar..... 535

Y

Y-Boxes, Wattmeter, Weston..... 162

The Graybar Tag



Symbol of Distribution

A NATION-WIDE SERV
Seattle
Tacoma
Spokane
Portland
Salt Lake City
Denver
Omaha
Oakland
San Francisco
Los Angeles
Fort Worth
San Antonio

CE OF DISTRIBUTION